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Edited by

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Medico Friend Circle

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Preface

Within ten years of its inception, the Medico Friend Circle (MFC) has become a familiar name in various circles of development workers. It is in response to this growing interest in MFC's analysis of health care, that we venture out to offer yet another anthology of articles selected from our monthly Bulletin.

This book does not carry the same degree of perplexity, which its two predecessors did. For, amidst the intricate scenario of problems, solutions and problems arising out of solutions, one discerns certain well-defined and definite areas of focus. The focus is at times a bit unsteady and not so definite as to generate dogma- not yet. We are still searching for solutions, and *not the solution*.

After the mad rush of critiques, arguments and counter-arguments, which characterised the earlier two books, particularly the first one, we paused to take a deep breath. A stage had arrived for some calm thinking. This was, in a way, reflected in the narrowing down of areas of focus, and the near total absence of debate in issues Nos. 56, 96 of the MFC Bulletin, which formed the source of this anthology. This was restructuring of ideas.

Thus, definite areas started to come under focus. What one sees *Under The Lens* is not the total picture, but a few definite foci in it. Moreover, is not what one sees under the lens, only an image? But the image helps in understanding the situation, in arriving at a diagnosis and thus in finding solutions.

We show you *Under The Lens*, some of the pathogens and the pathology: the wrong paths in health care, traps on seemingly right paths and a frightening pattern of "no health". The book contains admissions of self-made mistakes. (The other side of Health Education; Role of VHW); the myths in community health (People's Participation; Community Participation in Health Care; Health For all by 2000 A.D.); the wrong directions on the national highway of health (Health Care Vs.the Struggle for life; Misuse of Antibiotics; Is BCG vaccination useful? How successful are Supplementary Feeding Programmes?); the subtle and not so subtle, pressures of international politics on health (Research: A Method of Colonisation; Multinationals in Drug Industry).

In line with the earlier two books, the present one is also a pot-purri of different aspects of health and health care, a reflection of the wide and varied interests (but always deep) of MFC. It covers community health (questioning on the way, whether there is a homogenous community, what is meant by People and by Health for All), drug policies, clinical medicine, nutrition, contraception and much more. There is a heavy emphasis on various aspects of drug policy and therapeutics. The analysis by Anant Phadke (Multinationals in Indian Drug Industry) and Anil Agarwal (Towards a Relevant Drug Policy), clearly bring into focus the growing concern of all genuine thinkers regarding the dangerous and erroneous drug policies in the Third World.

An orthodox reader may wonder how a caste war Among Medicos or Minimum Wages for Agricultural Labourers could ever find a place in a debate on health. This only helps to emphasize MFC's main refrain that Health is not a medical subject but a socio-economic topic, and that no true health worker can isolate himself (or herself) from the current of socio-cultural and politico-economic forces. This understanding reveals the other side of the coin too—finances are not the main constraint in achieving Health Care for All (Family Planning & Problem of Resources; Kerala, A Yardstick for India).

This book is an attempt to bring under focus issues which have hitherto been missed or ignored and to adequately magnify them, to put them under proper perspective. We hope you will welcome it as enthusiastically as you did its predecessors (there is a heavy demand for the republication of the other two anthologies). If this attempt proves to be an equal success, I do not know whom to thank and whom not to. The MFC Bulletin and the Anthologies have always been a group effort (even the title of the book is chosen by a group of members after serious debate). Personally, however, I wish to place on record my deep sense of appreciation and gratitude to Anant Phadke, who as the *de facto* editor, bore the whole brunt of the publication of the

MFC Bulletin. We thank all those who contributed articles to the Bulletin. Our sincere thanks to Augustine Veliath of VHA I, New Delhi and his colleagues, who have once again offered to oversee the publication of our book. The title cover is always the special effort of Ashok Bhargava, the founder-convenor of MFC, whose sense of aesthetics and humour remains unsurpassed in the group. Last, but not the least, we thank you, dear reader. It is through your goodwill and encouragement that, despite continuous attacks of financial crisis, we have mutated into a resistant strain.

September 1984 Kamala S. Jaya Rao

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"See How They Grow" for the Cartoon appearing on page 276.

—Editor

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"The paramedic was struggling against these odds with her small health kit and fighting spirit. Of course, the picture of health might have been still worse without G.K. and Salama."

—**Abhay Bang**

1

Learning from the Savar Project

Abhay Bang

The car was passing from Dhaka airport to the Gonoshosthaya Kendra of Savar. The landscape of Bangladesh was unfolding before me. A decade ago while working as a medical volunteer in the refugee camps during the liberation war, I had a few glimpses of Bangladesh. The news of political upheavals and natural disasters were disturbing, but at the same time some interesting, rather sensational news of the community health work started in Bangladesh by a group of young doctors led by Dr. Zafrullah Choudhary and their paramedic programme had aroused my curiosity. And here was I today heading towards the famous Gonoshosthaya Kendra (G.K.) passing through the mainland of Bangladesh seeing both her beauty and ugliness.

Beautiful, because of the natural greenery and abundance of water. Ugly because of the poverty, the worst I have ever seen. The per capita yearly income for Bangladesh is Rs. 560; one of the lowest in the world. There is gross disparity and the lower 50% of the population has a per capita yearly income of Rs. 225 or less. Population density in this country of 85 million is one of the highest in the world. 91% of the population live in the rural area. 50% of the total population has either no land or less than half acre of land. Literacy rate is 20%, for women it is less than 10%.

Soon the car entered into the headquarters of G.K. The first to strike you are the buildings, a two-storey hospital-cum-office building and a four-storey hostel for paramedics and other staff. The total cost is Rs. 9 lacs. "Was it so essential?" Same is the feeling of Zafrullah Choudhary, who later said, "For the initial 1½ years we were living in tents and temporary sheds, and had no money for buildings. An armed robbery, heavy rains and inconvenience to the patients and the staff created a need for buildings. Therefore, when we received generous foreign aid for buildings, we committed the mistake of accepting the offer and within the next two years these incongruous edifices came up."

What is more impressive is the simple and austere living style of the staff and the equality in relationships. Except for a few families with children, all other workers live in the same building with similar accommodation. From the gate keeper to Zafrullah, all take the same, ordinary food in a common mess. G.K. has a

novel rule-reminding me of Gandhiji's Ashram in his time—everybody in the project works for 1½ hours in the morning on the farm. "This not only helps us to become self-sufficient in our food requirements, but also builds up a healthy equal relationship among us, an identification with the manual labourers of rural areas and also helps to screen and eliminate the elitist among the new recruits". All these things must have contributed to the creation of the warm, friendly and family relationship which exists in the whole team of G.K.

I shall not describe the history and the activities of G.K. as these have already been published (MFC Bulletin No:57). Instead, after a brief description of the activities, I shall try to discuss some questions and inferences from their experiences and some of their recent experiments.

The Paramedics

G.K. was started in 1972. With only 2500 doctors for the 75 million rural people (1 doctor for 30,000 population) and with only 700 trained nurses in the whole country, the Western health model was irrelevent. "The purpose of our project is to evolve some system by which the medical care of the whole population of a particular area can be undertaken efficiently and effectively with the minimum expenditure and maximum benefit, with the employment of limited medical power" (original project proposal, Feb. 1972.)

In the last eight years, G.K. has been able to develop such a system with the paramedic as its main health worker. There is a central 30-bedded hospital with X'ray, pathology and operative facilities. Office and training centre is attached to this hospital. The headquarters and its 4 sub-centres together try to deliver primary health care to the 91,000 population of 100 villages of Savar thana.

Each paramedic (except village based) covers about 2500 population (2 to 5 villages-depending upon the size of the villages). The subcentres have a weekly OPD when a doctor from the headquarter visits, but offers emergency services all the seven days. Some subcentres, managed entirely by paramedics, have small indoor also. The headquarter hospital runs a twice-a-week OPD. Most of the cases are seen and treated by the paramedics. Doctors mainly work as referral persons, as trainers and as administrators.

A paramedic has usually studied up to 7th standard or 10th standard, an unmarried girl; almost all are recruited from outside because of the lack of educated women in the Savar area. They are given about one year's in-service training, contents being similar to ANM training in India. They are full time workers of G.K. Drop out rate is 50%.

How the Paramedic Works

Salama, the paramedic with whom I went to a village on bicycle to see her routine village visit covers 4 villages. She visits each village about once a week, sometimes twice; goes house to house about 25 houses in one visit. The main assigned jobs are (1) Treatment of minor illnesses (2) Immunisation-BCG & Triple antigen to all children and tetanus toxoid to all the women of child bearing age. (3) ANC check up (4) motivation for FP and distribution of oral pills (5) Health education (6)

Detection and referring complicated cases, specially among pregnant women and children to the doctor at subcentre or at the headquarters.

The sincerity and the efforts put in by Salama were worth seeing; but the response of the people and the health status didn't seem good. The causes of low health status were also obvious—terrible poverty, poor sanitation (water, mud and flies everywhere), ignorance and a resultant apathy. The paramedic was struggling against these odds with her small health kit and fighting spirit. Of course, the picture of health might have been still worse without G.K. and Salama.

I accompanied Dr. Kamal to a subcentre. That was the OP day for the subcentre. Three girl and two boy paramedics, all unmarried, stayed at that subcentre—must be a sensation in the rural Muslim community of Bangladesh. The OPD was overflowing with patients. One could observe that neither the paramedics nor the doctor were over-using antibiotics or injections. Same experience at the headquarters.

GK has innovated some unorthodox methods. Diarrhoea and cholera are very common in Bangladesh. When the Cholera Research Laboratory (CRL) at Dhaka evolved the electrolyte mixture, GK modified it to "Lobon-Gur", that is salt and jaggery mixture. Jaggery is easily available in every house, is cheap, and provides sucrose and potassium. CRL later did field trials on this 'Lobon-Gur' mixture and found it almost equally effective.

About 85% of the tubectomies are done by the paramedics with very low complication rate. The patient is discharged within two hours and spends the post operative period at home. This has been found to be safe and also prefered by the patients who avoided tubectomies because of 7 days' hospitalisation.

What do People Want?

The study of the coverage and health impact of G.K. raises some questions and offers useful lessons.

In the year 1975-76 the OPDs (at headquarter and subcentres) treated 48,000 patients while the paramedics on their village rounds treated only 6000 cases.

We all speak hoarse on behalf of the dumb poor of the villages and advocate a decentralised, simplified, deprofessionalised, cheap medical care for them. But in the GK experience, when a fairly well trained (approx. 1 year) woman paramedic is going to the door step, only few people are availing her curative service and the majority are prefering to walk a longer distance to the subcentre or to the headquarters.

There are two possible reasons which were discovered during the discussion (1) People still felt that the curative services offered at subcentre or headquarters are superior to the services of the paramedic. The mystification about doctors, indoor buildings and injections influences their choice. (2) Paramedics are ill-equipped in their curative powers. They don't have chemotherapy beyond sulfas. This has acted as an impediment for showing good curative results which in turn diminishes the cooperation extended to her.

Thus Far and no Further

What is the impact of G.K. on the health status of the people?

Though comprehensive statistics are not available, the one offered by G.K. shows that the infant mortality rate in GK area is about 120 as against 140 in Bangladesh and the birth rate is 29 as against 44 in Bangladesh. The impact is definitely there but a point of stagnation has come, beyond which further improvement in health indices has become difficult.

I felt that whatever improvement G.K. could achieve is mainly because of cheap, effective, widely available curative services. A cure at an early stage is a major preventive force. Some improvement is attributable to lower birth rate because of family planning, oral rehydration therapy in the cases of dehydration and tetanus toxoid to mothers. But probably all these measures have reached their saturation point. Some further improvement might occur if the curative powers of the paramedic are increased and if her acceptability increases. But the poor paying capacity of the people will limit their utilisation of curative service. Further, significant improvement will not occur unless poverty, illiteracy and poor environmental factors are changed. Improving environmental factors is difficult in Bangladesh, where most of the land is under water for 6 months in a year. Huge inputs will be necessary to change this situation, which people can't afford.

So GK offers a good case, demonstrating to what extent the health status can be improved by health measures alone and then how an impasse comes because of socio-economic factors acting as bottle neck. Such conclusions are possible because though GK has a comprehensive vision and has economic and educational programmes also, they are too small to effectively influence the whole population and hence the main force is still the health activity.

What about Peoples Participation?

In GK's experience it is very difficult to achieve active community participation. Health committees formed in the villages almost never functioned effectively. Health is not the priority. The paramedics of GK mostly are recruited from outside and being unmarried girls, stay together in the dormitory rather than in the villages. Thus the community health programme of GK is in the Director, Dr. Qasem's words, "village oriented but not village based".

Some of the conclusions thus drawn may seem negative. But these are the hard facts of community health work and anybody jumping into this field would better learn these lessons rather than having illusions about massive people's mobilisation through health work, economic self reliance and improving health by health measures alone. I have found friends at GK very open and honest in accepting and discussing their limitations also. This is a rare quality in a successful project and this increases the educative value of GK very much.

New Growth-Point

In the last few years Gonoshosthaya Kendra has grown positively in many new directions and I shall summarise them in brief.

1. Realising that health cannot be improved without removing poverty and illiteracy, GK has started a credit cooperative programme for the rural poor (about Rs. 1.5 Lac in 34 villages) and literacy programme for women.

2. Handicrafts training for women to make them economically strong.
3. A vocational school for children after realising how useless is the present education system.
4. GK has developed a very good documentation centre and library on various aspects of community health.
5. Realising that a change in the health status of a small area by a new model of primary health care is not sufficient, the doctors at GK did systematic efforts to influence the medical education system. With the involvement of the Ministry of Health and PSM departments of medical colleges, GK got recognition as rural health centre for teaching post graduates in PSM and the under-graduates. Students from 3 medical colleges came in batches of 15 and stayed for 10 days. For the first time they were exposed to hard rural realities, the real health problems and the inadequacy of Govt. health system and their medical education. A systematic course was developed at GK for 'the conscientisation' of medical students. Students found it very thrilling. They went back and described their experiences to their friends and GK became a craze among medical students. These students formed groups in Dacca and would discuss the problems of health and the underlying socio-economic factors. A doctor from GK used to keep in touch with this group and attended their weekly meetings.

The novel experiment went into cold storage because (1) The students started questioning their teachers in PSM departments. "GK is making them communists?"

was the reaction of their teachers. They stopped sending the students. (2) The student group which had developed could not find effective action programmes to translate its theoretical understanding about the health and social problems into concrete health action. Gradually the group cooled down.

What do we in MFC who have tried similar methods of student involvement learn from this experience?

6. The private medical practitioners, including the 'quacks' are still the most effective vehicles of the curative health services, well accepted by the people. How to make use of them for better health care to the people? A few months ago GK has started a Bengali monthly (64 pages) which aims at educating these general practitioners specially in the rural areas about scientific methods of curative as well as preventive care.
7. Bangladesh has a drug consumption of Rs 55 crore, 80% of which is controlled by foreign multinationals. They sell their products by brand names at very high cost and also neglect the production and supply of essential drugs, taking keen interest in tonics, B'complex preparations and drugs for the diseases of the rich. This results in the scarcity of essential drugs. To combat this situation. GK has jumped in a big way into pharmaceutical production. Only the 110 essential drugs listed by WHO will be manufactured and will be supplied by the generic name at a cost which will be 50 to 60% of the cost of brand name preparations in the market. An effective propaganda will be made to convince doctors to accept these preparations. A quality control unit, biggest in Bangladesh, has been set up to safeguard the quality of these generic name products. The total investment in this industry will be Rs. 4 crores, the fourth largest pharmaceutical unit in Bangladesh.

These new ventures of GK cannot be evaluated at present but are definitely powerful efforts to influence the health system in the country,

The team spirit and the "family" relationship in GK is a thing to be experienced. But how to get new persons is a problem faced by GK. The best of the GK team are still those doctors and girls who came together in the initial war years.

The most crucial test was the time when an active paramedic-Nizam was murdered in a village called Shimulia where he had gone to start a GK subcentre. This was a threat to a local medical practitioner and he with some other influential vested interests arranged for the cold blooded murder of Nizam. The whole area was terrorized and GK was shaken. Zafrullah personally stayed in that village and dug out the whole story of the murder. Eye witnesses were available but still the real culprit remains free even today.

But salutes to the determination and courage of the paramedics, who, when questioned by the team leader as to what to do, said that they would accept the challenge and would start a subcentre in the same village-and they did: Shimulia is one of the most popular subcentres of GK:

GK offers immense potential for learning. Its successes, its failures, its innovations and its mistakes—all teach much to those interested in the problems of community health.

In a village meeting, when you try to get a consensus, the entire community does not turn up. The participation is dominated by the vocal affluents, whose opinion cannot be considered as that of "the community" we wish to cater.

—**Ulhas Jaju**

2

Role of the Village Health Worker— A Glorified Image

Ulhas Jaju

The MFC Bulletin Jan, 1980 (No. 49) has brought out the comparison between the doctor and the village health worker (David Werner in "VHW—Lackey or Liberator"). The appropriate future role of a doctor, according to the author is on tap (not on top), as an auxiliary to the VHW, helping to teach him/her more medical skills and attending referrals at the VHW's request (for the 2-3% of cases that are beyond the VHW's limits). The VHW has been recognised as the key member of the health team, is the doctor's equal, and one who assumes leadership of health care activities in his/her village, but relies on advice, support and referral assistance from the doctor when he/she needs it.

Our experience with village health workers in Nagapur village is as follows: A male matriculate 30 year old village youth was selected by a Gram-Sabha (village meeting) for medical work. He used to bring drugs from the market, dispense them and keep the record He was paid nominally through the village fund. He was taught the treatment of common ailments but the people did not like to take treatment from him and used to wait for the doctor. Concepts of sanitation and good nutrition suggested by him were not relevant in the existing poverty. When we could not offer him a clerical job as per his expectations, he started his "Pan Shop" in the city nearby. Naturally he did not have much time left to spare for village health work. We were forced to think that the village health worker should be a less educated or illiterate lady who will remain in the village. Accordingly we now selected a 'dai' for our work. She continues to be with us till today. But apart from conducting delivery and post partum care, nothing much is contributed by her.

We were thus forced to re-think about the role of the village health worker and his/her effectiveness. Let us take up some important aspects.

Selection of Village Health Worker

As is quoted, ideally VHW should be selected by the community. In a village meeting, when you try to get a consensus, the entire community does not turn up. The participation is dominated by the vocal

affluents, whose opinion cannot be considered as that of "the community" we wish to cater to. These vocal people try to select some one of their interest and the real community remains silent. As the maternal care during delivery is supposed to be a filthy job, the educated and high caste candidate does not volunteer. The low caste, illiterate worker unless backed by a medical team (this includes the referral hospital), is not respected by the village folk. Thus the insistence that VHW should be selected by the entire community is impractical in the field. What matters is the selection of a less educated or illiterate VHW from the poor section of community by the doctor who sees potentialities in the candidate to carry on the work as expected.

Acceptability of VHW by the Community

Mere living in the same village does not make a person acceptable as VHW specifically if VHW comes from the poorer section and a low caste. Acceptability is directly related to the benefits that are offered through VHW. VHW by himself can not offer much. Thus in practice, acceptability of VHW depends on how strongly the medical team (which provides these benefits) supports her as a link between the community and the health delivery structure. If all the benefits are channelised through VHW and if they are such that they appeal to the people, then only VHW is accepted. The curative role that the VHW can perform is minimal (mild gastroenteritis, short term fever, skin infections, upper respiratory infection, etc) which alone cannot confer much acceptability. If the drugs doled out by

VHW are not free, then the acceptability of curative role further sinks down. It is but natural that one likes to consult a medical man for his illness if he has to pay the cost. The glorification that VHW can be a doctor of the community, that 'VHW can take care of almost all the cases', is too much of a simplification. Moreover to say that 95% of illlnesses in the village OPD are within VHW's limits, is to forget that it is not important what percentage of illness (which are mostly self-limiting) can be treated by VHW but how many cases can be picked up in time and promptly referred to the doctor. Death due to delayed recognition of its seriousness may kill only 5% of the patients but it is 100% for the person who dies, and credibility is achieved only through proper treatment of such cases.

Incentives to VHW for a Qualitative Role

The incentives for putting all efforts in any endeavour can be, money/material, prestige, power or an enjoyment of creativity. The last is out of question for a poor and low caste VHW who is trying to find out his/her own identity today, struggling to make two ends meet. Prestige and power incentives attract those who have their bare necessities satisfied. Thus in practice it is the material incentive which dominates the picture. If the VHW is paid by the medical team (as is seen in most of the projects) VHW is then responsible to the team and not much to the community unless the team is receptive to the feed-back from the "real community". If VHW is expected to be paid through the contribution from the community he/she serves (as we did) then the contribution depends on the

acceptability of VHW by the community. In trying to insist that VHW should get remuneration from the community they serve, we observed that in due course of time the rich section starts keeping away (we collected money proportional to their economic status: thus rich persons had to contribute much more in comparison to a landless labourer.)

Naturally the community we were serving was split in two, the rich minority being deprived of all facilities as they refused to contribute towards the village fund. If we do not insist on contribution according to the capacity of the contributer, the total amount collected is too little to meet the requirement. The other alternative is to pay the community health worker through a nationwide government scheme. The VHW then becomes equally irresponsible to the people as is the government today.

What can be the Role of VHW?

With the above hard facts in mind, in the existing structure, I see VHW only as a link between the community and the medical team. This link can function for, (i) imparting health education, (ii) offering drug treatment for some specified mild, illnesses, (iii) quick referral of other illnesses to the doctor, (iv) conducting home deliveries when approved by the doctor after regular ANC check up and (v) running community kitchen for underfives. It is imperative that the medical team should fully back VHW and should refuse patients when they come directly to the medical team. She cannot be the doctor's equal at least for curative services. VHW's limitations must be realised and definite responsibilities should only be given. All these functions have to be under close supervision of the medical team.

I strongly feel that some material incentive must come from the community (contribution collected from every body who enjoys the facility but according to their capacity) and the prestige and power incentive be supplemented with the backing of the medical team. In the process, some VHW's may enjoy the satisfaction of creativity. When a common man contributes towards the remuneration of VHW, he also sees to it that the facilities which should percolate through VHW must reach him and if he fails to get them, he comes out aloud to fight for his right (he has paid for it!).

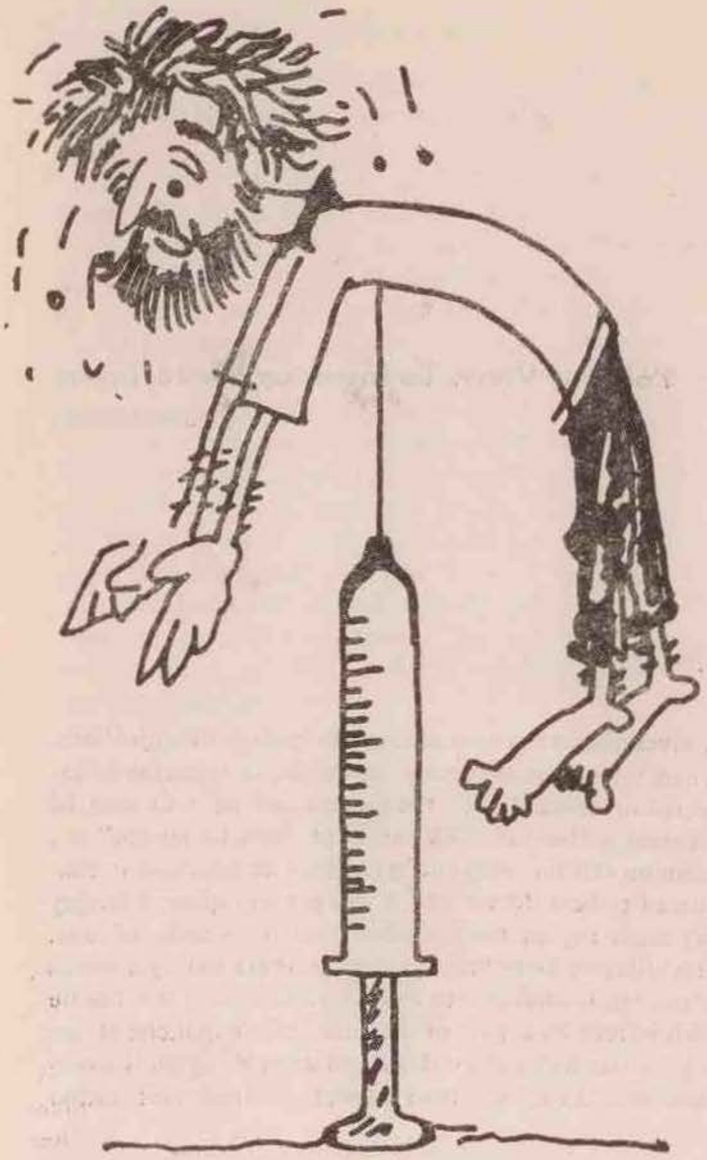
The purpose of writing this article is to invite discussion on this issue, specially from those who are in the field and have experienced the difficulties in implementing the three tier system. Let actual field experience of all of us clearly define the role of VHW in today's structure.

3

Point of View: To inject or not to inject

Janet Aitkin

A mystique has grown around the giving of injections. When allopathic treatment is sought, an injection is expected or demanded by the patient and he will not be satisfied without it. "Ek sui dijiye theek ho jayega" is a common refrain. Anyone who gives an injection is considered to be a doctor and a villager will quite willingly pay many rupees for the often dubious benefit of one. The villagers do not regard injections are simply a means of putting medicine into the body. For them the needle itself is seen as a part of the cure (cf acupuncture) as, in a similar way pulse-taking and even X-raying is sometimes mistakenly regarded as part of treatment rather



than as a preliminary to it. The occasional quick result, the accompanying discomfort and the extra expense incurred are factors which have served to boost faith in injections.

Obviously there are dangers inherent in this great demand for injections. The danger of sepsis, paralysis, reaction and besides this, the exploitation of the villagers, the unscrupulous money-making which takes place in their time of misfortune.

We should educate the villagers and teach them what an injection is and that treatment with tablets may be just as efficacious, cheaper and less hazardous. But it is a hard task when the attitude is already ingrained to such an extent that when given only tablets a villager will go and seek his injection elsewhere and be convinced that this is what brought about the cure even when, obviously to us, it did not. And then there are bound to be those cases when an injection was really necessary and worked and we unwillingly reinforce the villagers faith in them. Unless we studiously avoid the use of them, this is inevitable.

It is the view of some that village health workers should not be taught to give injections because they are so susceptible to abuse. I would like to answer that it is those in the medical profession itself who are largely responsible for this abuse. During my time in India I have not noticed any difference at all in the method of giving injections used by qualified doctors and by quacks. It is apparently common practice to keep a syringe in a dirty card-board box, to wipe a needle and rinse a syringe in spirit rather than boil them and to push the needle along one's unwashed index finger while injecting. I have seen a qualified doctor rinse a syringe and needle in water, I wouldn't even drink, before giving the injection. Misuse applies to unnecessarily giving injections as well as to bad technique; for example, a single injection of tetracycline or penicilin for common cold or cough; use of streptomycin (with penicillin) for non-specific infections in T.B. endemic areas; frequent recourse to Vitamin B injections (with no advice about diet, one might add). How can one expect them to use higher standards when doctors themselves do not?

On the whole, a doctor is immune to repercussions in the event of something untoward happening to a patient as a result of his treatment. He may be shielded by the ignorance of his patient, by his institution, by his government posting, his pocket or, as a private practitioner he will probably have the means, if the worst come to the worst, to move elsewhere. He has much less to fear from his injections harming someone than a village health worker. A village health worker is living among his patients, they are his people, his friends, his relatives and he has to continue to live with them. If he is originally taught in a correct manner and is fully aware of the dangers and precautions to be taken I see no reason why he should not give injections. Besides, it is a part of his task to enlighten his neighbours about the nature of disease and of medicine. If he is denied the right to give injections we are reinforcing the mystique surrounding them. Whilst giving injections when they are really necessary, the village health worker is in a better position to gain the confidence of people and teach them, than if he never gives them. If

he is an unsuitable person for this role in the first place, then it is not only injections that he is likely to misuse; an overdose of tablets for example, could have just as serious results.

It is important to be flexible in one's attitudes; the need for a village health worker to learn to give injections will vary from place to place. But I have an uneasy feeling that those who categorically refuse to teach village health workers to give injections are demonstrating a distrust towards them and imagine them to represent a threat to the medical profession. To answer that village health workers should be more concerned with prevention and education is to deny the reality which is that, for optimum effect, curative and preventive work must go hand in hand.

Ultimately this results in the community health project becoming dependent on rich clientele for it's economic self-reliance. To satisfy this clientele comes sophistication (X-rays, E.C.G.), more specialization, and more and more workers and time to cope up with all this. The project also follows unscientific, unethical practices like giving unnecessary injections, tonics, mystifying symptomatic relief etc. to draw and retain the paying patients."

—**Abhay Bang**

4

Myths in Community Health

Peoples' Participation and Economic Self-reliance

Abhay Bang

Some decades ago, development meant doling out food, clothes, medicines and money to the poor who were just passive recipients. Gradually it came to be realised that this was a bottomless pit. Thus, came the concept that 'people' should work for their own improvement. However it was soon realised that people cannot be made to work unless they were involved in the process of development. Thus came the idea of people's participation.

There are three questions I want to ask.

1. What do we mean by people's participation?
2. Who are the 'people'?
3. Is people's participation possible in community health?

Different people have different meanings for people's participation. Some project workers claim overwhelming people's participation in their projects; thereby meaning that people are taking benefits from their programme. Some call it people's participation when the people are receiving benefits not as charity but are paying or rather are forced to pay for the benefits.

A very successful community health project claimed that "the villagers collectively constructed a road from our hospital to the village so that our health team could reach the village", and foreigners are much impressed by this 'people's participation'. One however finds that the road was constructed by the labourers of the village in 'food for work' programme.

That same community health project says, "Our village health workers have been selected by the people of the village and our project has a people's committee as advisory board". Though this is meant to be participation by the people in decision making, on closer enquiry, one finds that almost every V.H.W. was selected by the head of the village and two or three influential persons and the project staff. The people's committee consists of established leaders and the rich people of that area.

Obviously all these are not examples of people's participation.

The next question 'who are the people?,' is a tricky and political question. A big power invades a small

nation and puts its 'yes man' in power and says 'people of this nation have invited us to liberate them'. A rich man heading the Gram Panchayat takes a decision as to who should be the VHW from that village. The male head of the family says "the tradition of our family requires women to remain in purdah and all people approve of this tradition".

In all these instances decision making does not represent the desire of all the people, definitely not of those who have no voice and freedom to speak but who very badly need an opportunity to take part in the decision making to ensure that it is in their interest and not to oppress them. Thus I have tried to show what is not people's participation and who are not 'the people'.

For operational purposes, we will have to say that the oppressed, the exploited and the needy should have priority in the comprehensive definition of 'people'.

When these people understand the situation and issues by critical consciousness and take part in decision making, implementation and evaluation of programmes and take the responsibility of the work as well as share in the benefits...it becomes people's participation.

There cannot be genuine people's participation without a proper political atmosphere and educational process. Even then true people's participation may be a distant goal.

Prerequisites of people's participation

Today's political and socio-economic system is directly opposed to real people's participation. How can there be a true people's participation when women have no equality, the poor have no strength to assert and the oppressed have no opportunity to participate in the decision making of the political system? When we, the enlightened elite have no scope to participate in the affairs of the nation except to vote for the best of the available bad choices once in five years or to write a letter to the editor once in a while, how can those who are weak, poor, oppressed and ignorant, really participate?

It is obvious that real people's participation is a distant dream to be achieved by a process of economic, political and cultural liberation.

The expectation that people will participate in a real sense in a mere community health programme is unrealistic. This conclusion is also supported by the experience of numerous workers in community health who have learnt it the hard way that people cannot be mobilised and organised through and for health work. It does not mean that there should be no efforts towards people's participation in health programmes. All efforts to involve the people, especially the needy and the oppressed in making decisions and their implementation should be made. This will marginally help a participatory culture to be created. But it must be realised that people's participation is essentially a political and educational process, and health work has only weak political implications. Without a proper political context, not much of genuine people's participation can be achieved in community health work alone. Hence people's participation per se cannot be a primary objective of community health programmes.

Some workers use another misguiding term, 'community participation' in community health programmes. There are two obvious fallacies. One, there is no organised entity as a 'community' in the villages of India. There are individuals, families, castes, classes, political groups and one cannot create communities out of such individuals and groups for the purpose of and through mere community health work (though community health work might marginally help this process). Secondly, claims of community participation, in reality mean only the existing social organisations (Panchayats, etc.) and established leadership are involved in decision-making.

Economic self-reliance: Why?

Another popular fashion-word is 'economic self reliance', commonly used as a criterion of evaluation by many agencies and projects in community health. How did this get such importance that it has almost become an important objective of community health programmes? The workers are desperately after this objective, forgetting that economic self-reliance is not the purpose of their work and they cannot afford to sacrifice their original purpose i.e. to improve the health of the vulnerable people.

With growing realisation in the developed (exploiter) world that doling out food and clothes cannot permanently improve the life of the poor in the undeveloped (exploited) countries, a concept was born that people should be given such economic programmes which can generate income for themselves and hence they don't have to depend on outside help eternally.

Self-reliance Logic

Fine! Good policy! But this has to be an objective of economic programmes to be achieved through economic activities. This has been implicitly accepted in the field of community health also. This has caused tremendous diversion and confusion and the time has come to challenge this assumption. When a community health project tries to become economically self reliant, it adopts two methods.

(a) It starts charging the rich to gain more income, (the so called 'Robinhood' method). Ultimately this results in the commmunity health project becoming dependent on rich clientele for it's economic self-reliance. To satisfy this clientele comes sophistication (X-rays, E.C.G.), more specialization, and more and more workers and time to cope up with all this. The project also follows unscientific, unethical practices like giving unnecessary injections, tonics, mystifying symptomatic relief etc. to draw and retain the paying patients.

The shrewd rich class is almost never dependent on this community health project alone for its own health care. They almost always get their health needs fulfilled through the commercial private health system. Only in very remote places, such persons might depend on community health projects. Thus the community health project becomes dependent on the rich for its income and survival rather than otherwise. This brings in gradual changes in priorities, strategies, methods, behaviour, and the community health project ends up in serving primarily the needs and priorities of the rich.

An analysis of the clientele of most of the mission hospitals, who in an attempt to become economically self reliant started charging the cost of the treatment to patients, shows that ultimately they ended up with two maladies. They were underutilized, and were utilized predominantly by the rich class.

Sathyamala from VHAI has described (Health For The Millions, February 1980) how she saw at many places voluntary hospitals half empty and beds occupied by the rich who alone could pay the charges; and the next door Government hospitals and dispensaries-inefficient, low quality, corrupt but still overburdened, full of poor patients. What an irony! Then why should dedicated missionaries run such hospitals? Even the private commercial health care system (eg. Jaslok Hospital) can do and does the same.

(b) The second strategy adopted is to charge the poor at least the cost of the treatment. We have already seen how it results in elimination of the poor from the curative health care. 60% of admissions in a hospital of a famous community health project which claims to be economically self-reliant are the rich, coming from the area outside the project. The remaining include rich and poor from the project area but again in what proportion? The hospital is mainly utilized by the rich.

An argument forwarded is that the poor are given primary health care through VHWs financed by the income generated from the rich in the hospital. It means the VHWs give elementary care in the village to the poor and rich also but doctors and hospitals are mainly for the rich. Such discriminatory strategy becomes inevitable when community health projects accept the objective of economic self reliance and try to raise income through health programmes.

It is true that the poor should be charged a little for health care so that they do not become objects of charity and pity. Also, if they are charged they feel that they have paid for health care and so the care must be of some quality, earned by them. It is common experience that the poor also value such treatment and advice. However this logic when taken to its extreme that the poor should pay the whole cost of treatment, the poor, already exploited by the present economic system, are exploited further.

When this objective of economic self reliance is almost thrust on the community health projects in the voluntary sector by funding agencies, let us ask a few questions.

Who is self-reliant today?

Is the government self-reliant in the sense it generates all its necessary income by productive activity? No! It depends on squeezing the people by taxes, direct and indirect. None of the welfare programmes of the government are self-sufficient.

Are the funding agencies self-reliant? In spite of decades of working, all of them continually depend on donations from people in the developed countries. They do not generate their own income by an economic programme run by themselves, even though their main field of work is fund raising.

Funding agencies can raise money through Western capitalism. However this capitalistic system depends, at least partly on the developing countries for its market, and remember, the market is the source of income for capitalism.

It is unrealistic to expect in such a situation that community health projects should be able to generate enough income to become economically self sufficient.

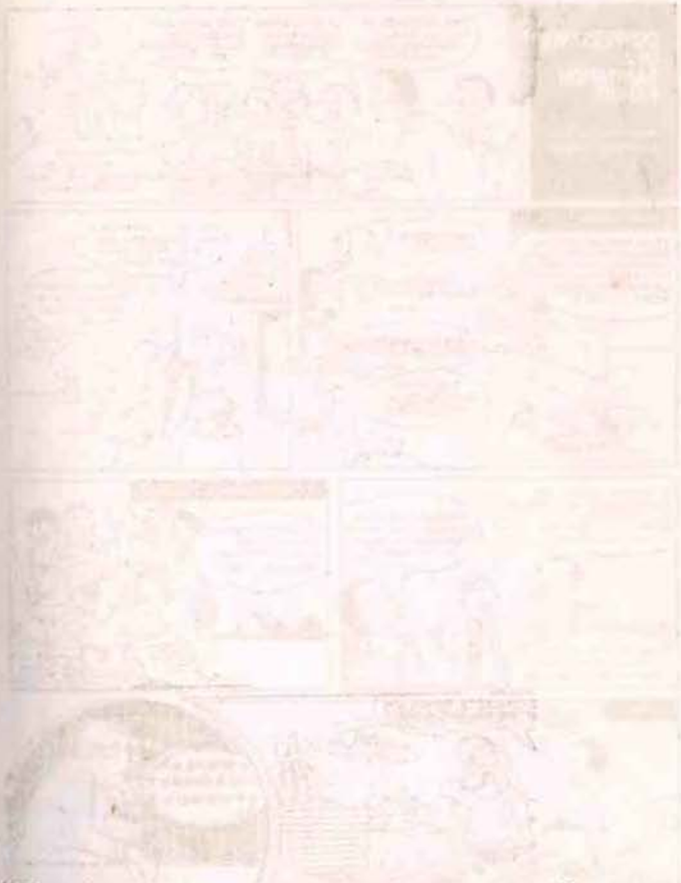
Many community health projects tacitly accept this objective of economic self reliance under increased pressure by funding agencies and they are forced to either deviate from their primary objectives or to do various manipulations and show that they are economically self-reliant. This includes artificially swelling the health income, (some times by selling the donated drugs or by including the farm income) or by hiding certain expenditures on health programme. Some projects reduce the expenditure by underpaying their staff. All these compulsions come because of the acceptance of the criterion of economic self-reliance.

Having observed closely many community health projects in India and abroad, and following our own experience, I wish to say that no community health project which is predominantly preventive and educative in nature and which serves mainly the poor can become economically self-reliant. All such claims need to be re-examined.

Projects should try to generate income either through economic programmes or from committed supporters who have money to donate for the cause. Such income generation will make it less dependent on outside aid. This cannot however be the primary objective of community health work.

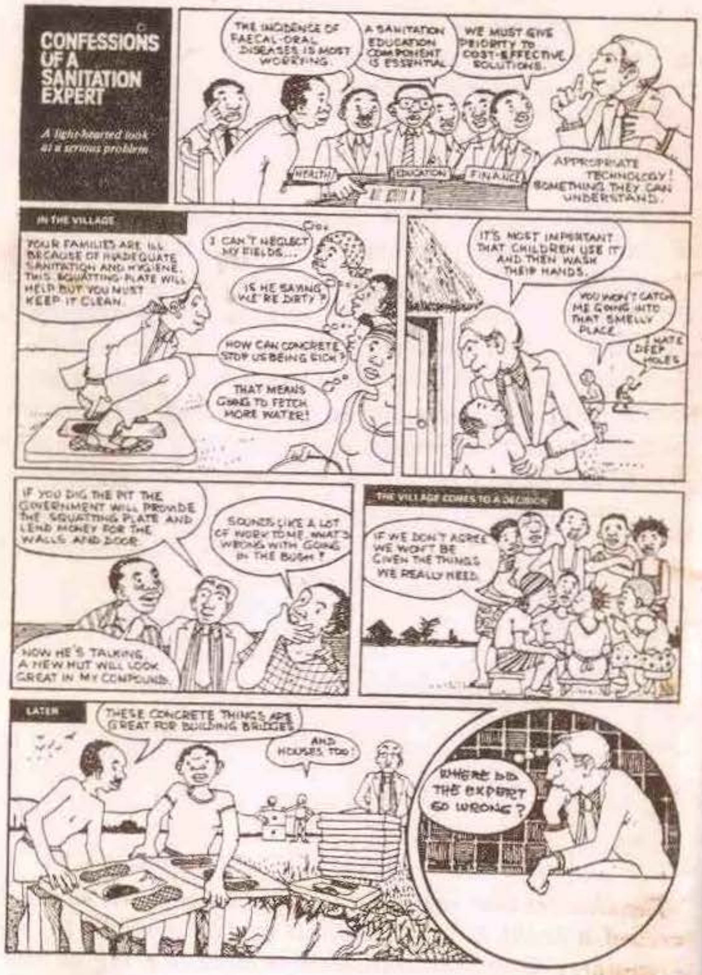
False Limitations

Another aspect which community health projects should not uncritically accept is to maintain per capita health expenses in their programme equal to that of the government. Government spends money on wrong priorities and allocates meagre resources for health. Voluntary health projects need not take it as their responsibility to show ways to fulfil health objectives within the false low limits set by the government. What voluntary agencies could do is to decide the minimum health care every person should get and work out the low cost level, whatever that be. This is the way by which one can press a system to mend its ways. Voluntary health projects should not try to fit into the System's false limitations. While deciding the minimum health care, the nation's economic standard (GNP or per capita average income) should be taken into consideration but not the per capita health expenses by the government. Otherwise we land up with a community health care which gives less than minimum to the real needy.



"The chances that community participation will emerge around a health issue is bleak. It may be possible in an area where some conscientisation is already going on and mass-organization has been successful."

—Ulhas Jaju


CONFESSIONS OF A SANITATION EXPERT
A light-hearted look at a serious problem
THE INCIDENCE OF FAECAL-ORAL DISEASES IS MOST WORRYING.
A SANITATION EDUCATION COMPONENT IS ESSENTIAL
WE MUST GIVE PRIORITY TO COST-EFFECTIVE SOLUTIONS.
HEALTH
EDUCATION
FINANCE
APPROPRIATE TECHNOLOGY! SOMETHING THEY CAN UNDERSTAND.
IN THE VILLAGE
YOUR FAMILIES ARE ILL BECAUSE OF INADEQUATE SANITATION AND HYGIENE. THIS SQUATTING-PLATE WILL HELP BUT YOU MUST KEEP IT CLEAN.
I CAN'T NEGLECT MY FIELDS...
IS HE SAYING WE'RE DIRTY?
HOW CAN CONCRETE STOP US BEING SICK?
THAT MEANS GOING TO FETCH MORE WATER!
IT'S MOST IMPORTANT THAT CHILDREN USE IT AND THEN WASH THEIR HANDS.
YOU WON'T CATCH ME GOING INTO THAT SMELLY PLACE
I HATE DEEP HOLES
IF YOU DIG THE PIT THE GOVERNMENT WILL PROVIDE THE SQUATTING PLATE AND LEND MONEY FOR THE WALLS AND DOOR
SOUNDS LIKE A LOT OF WORK TO ME. WHAT'S WRONG WITH GOING IN THE BUSH?
NOW HE'S TALKING. A NEW HUT WILL LOOK GREAT IN MY COMPOUND.
THE VILLAGE COMES TO A DECISION
IF WE DON'T AGREE WE WON'T BE GIVEN THE THINGS WE REALLY NEED.
LATER
THESE CONCRETE THINGS ARE GREAT FOR BUILDING BRIDGES
AND HOUSES, TOO!
WHERE DID THE EXPERT GO WRONG?

5

Community Participation in Primary Health Care

(Observations based on a case study)

Ulhas Jaju

This is a case study started by a voluntary medico-group in a village—Nagapur—6 k.m. away from Sevagram about three years ago. Having realised that health is not available or accessible to the rural people, a teacher in the department of medicine, initiated a study circle of like-minded students. This group took the initiative in starting voluntary health work in the villages around.

The work was initiated by the group with little or no direct exposure to community health. The whole process served as a learning experience and the programme evolved over a period of time. To do this it was decided not to put monetary or material inputs and to utilise the available resources. The group believed that services if doled out free may earn benovelence but will increase dependency in the minds of the people.

The selection of the village Nagapur was based on lack of health services in the village, cooperation from the village folk, approachability of the village on foot and the small size of the village which could enable closer contact.

The entry to the village was welcomed by a leader of the community, who collected people for a village meeting (Gram Sabha). People requested a regular weekly clinic. They offered the School building to run the clinic, an initial contribution towards the drug bank and also agreed to pay the cost of the drugs.

A village health worker (Dai) was selected by the group in a Gram-Sabha to help them in the treatment of minor ailments, drug purchase, dispensing, follow-up of the treated patients and basic antenatal and post-natal care. The Gram-Sabha agreed to pay the village health worker through a village fund which was to be collected in the harvesting season. Thereafter frequent meetings of the villagers were arranged to discuss health problems and organisation of health care.

The village fund was collected by house to house visit with the local leaders. The Gram-Sabha unanimously accepted the idea of contribution according to capacity i.e. according to land-holding. Most of the people preferred to pay in kind. The noncontributors were denied health facilities.

A socio-economic survey was done. Health talks on tuberculosis, leprosy, malnutrition, vitamin deficiencies, diarrhoea, family planning, vaccinations were held with the help of transparencies and case demonstrations. Importance of sanitation, the utility of soakage-pits, sanitary latrine were also discussed.

The families were divided into four socio-economic grades and utilisation of services by them were studied.

(I) Utilisation of O.P.D. services by the people of different socio-economic grades.

Socio economic Grade	*Total population*	*No. of people availing services*	*No. of times clinic attended in 1979 (41 clinics)*	*Ratio of clinic attendance to people availing services.*
I	155	83	151	1.8 : 1
II	126	101	144	1.4 : 1
III	117	66	139	2.1 : 1
IV	34	15	21	1.4 : 1
V	42	37	18	0.48 : 1
	474	302	473	

Grade 1—Families who employ labourers on yearly contracts (SALDAR) for agricultural work.

Grade 2—Families who own irrigated land, a pair of bullocks, but do not employ SALDAR.

Grade 3—Families who own unirrigated land, a pair of bullocks but do not employ SALDAR.

Grade 4—Families who own land but neither employ SALDAR nor have bullocks.

Grade 5—Landless labourer.

Note—Any other additional occupation (e.g. Dairy) raises the economic grade by I.

Obviously the village clinic was not much utilised by the poor community. It was realised that the poor man could not afford even the cheapest drug treatment for acute illness.

II. Utilisation of V.H.W. services

(a) Treatment of minor ailments was availed by few patients. They preferred to wait for the doctor to come.

(b) People did call her to conduct home deliveries but her advice to come during antenatal period for regular check-up was rarely acccepted. Pregnant women turned up at the clinic for examination only when the lady doctor was available.

III. Vaccination Coverage

Not more than 40% of the target group could be given B.C.G. vaccine. One child developed fulminating B.C.G. reaction and few others abscesses, which gave a set-back to the campaign. Polio vaccine was accepted by few people only as they were required to pay the cost and the vaccine according to them was not worth it.

IV. Sanitation measures

Only two soakage pits could be prepared. None accepted the sanitary latrines. Attempts to repair the community well proved futile as Gram Panchayat members were not keen and people could not force them to make Gram Panchayat funds available. A survey was done to understand people's reaction towards road-side defaecation practice. Interesting facts were revealed:

(a) Inability to spend money for latrine construction.

(b) Road-side is the safest place during night because the approaching road has street lights.

(c) Road-side is the cleanest place during rainy-season.

(d) They doubt whether they will move bowels satisfactorily when covered from all sides in a shelter.

V. Health talks

People did not collect in large numbers for meeting on health and health related issues. They did collect to see the "CINEMA" but the health message did not get through.

(vi) Nutritional supplement programme to undernourished did not take root because the mother was required to pay the cost of the food supplement and the feeding programme could not be sustained through the village fund.

These experiences made the group to evaluate their approach as to why sincere efforts did not breed success. The deep socio-economic and political roots were identified through series of discussions, based on field results. It was realised that the concept of prevention of disease and promotion of health did not appeal to the people because, (i) there is not much that can be done effectively in a low socio-economic setting without depending on additional input, (ii) health is not the priority need of the people. They are totally involved in trying to make both ends meet. Therefore a health activity which can not show immediate results does not make sense to the poor man.

By the end of three years the group could analyse, who regards this health work useful, from the data collected. By then (1980) curative inpatient treatment for acute illnesses was provided free by linking them to a health insurance scheme of M.G. Institute of Medical Sciences, Sevagram.

The data revealed that contribution towards village fund dropped slowly over three years. The drop-outs were from the richer families who tried to calculate the cost benefits for their contribution. They were not treated as "more equal" and therefore they kept themselves away from the idea of graded contribution i.e. more contribution by the rich community, which they accepted initially.

With more and more realisation of people's needs, the voluntary group got involved in other problems such as help in getting bank loans, electric connections to the water pumps in the field, approach road to the village, cross breed cows at a subsidised rate through available Government scheme, to start Balwadi etc. To provide wage earnings a scheme of Khadi Commission-Ambar-Charkha was initiated.

The results so far are elating. People readily collected for all the meetings. They came out with more and more problems for seeking guidance. The group commanded the faith of the poor community.

Summary

Health is not the priority need of the people. The initial active enthusiasm of the "Leaders" of the community was due to other reasons; the prestige incentive alone did not attract them for long. The participation of such vocal people in a community programme did not give a chance of equal participation to the poor.

The poor man, being lost in making both ends meet does not feel an imminent need for health care unless he is absolutely helpless without it.

In a poor socio-economic setting, self reliance in health care activities is a myth. The poor community has to depend on someone from outside, may be a voluntary agency or the state service. For channelisation of state services to the poor, the beneficiaries must be conscious enough of their rights and should be prepared to stand-up and demand for them. Health problems being the last in the priority list, it is very much doubtful whether health issues can be the tool around which people will organise.

3. Community participation in primary health care is a slogan that is glibly used without understanding what it really means. We must differentiate between community oriented projects and community based projects. In most of the community oriented projects, services are doled out free for which people gather around and it is then misinterpreted as community

participation. One must understand that community participation is basically a political act which emerges only if the issues involved are of priority. The chances that community participation will emerge around a health issue is bleak. It may be possible in an area where some conscientisation is already going on and mass-organisation has been successful.

[I always wonder how this myth, that the poor should also pay for health services to feel it is their right to demand, ever started. Nowhere in the world, not even in capitalist West do the poor pay. It is the duty of the State to provide certain services free, at least to the poorest sections and health is one of them. Health care delivery has really been successful in those socialist countries where free health care is really 'freely' available. To think that health care in the U.S. is the best is a big illusion—Editor]

The implementation of the activities embodied in Primary Health Care Programmes inevitably involves conflict. Yet so much that is written about Primary Health Care ignores the financial, political and professional barriers to improving people's health and to developing new patterns of health services.

—David Nabarro

6

Health for all by the Year 2000: A Great Polemic Dissolves into Platitudes?

David Nabarro

Introduction: Health for all and Primary Health Care

The appealing slogan "Health for all by the year 2000" was coined by international agencies in the mid-1970's to usher in an era of intensive activity by Health Ministries in many Third World countries. The ministries have adopted policies which concentrate on providing Primary Health Care for their people—on bringing a new style of comprehensive health services within reach of those who traditionally have been deprived of them.

The Primary Health Care (PHC) approach is radically different from the conventional pattern. It has, since 1977, been promoted widely by the World Health Organisation (WHO).

The PHC approach has three major components:

(1) increasing the availability of medical care facilities that tackle life-threatening problems commonly encountered by all sections of the population—men, women and children.

(2) emphasizing the extent to which people can help to prevent illness for themselves by adopting healthier lifestyles and changing harmful practices.

(3) promoting the involvement of the people in the delivery of their health services.

In order to develop PHC Services with wide coverage, Health Ministries throughout the world have established new groups and medical manpower—different grades of medical and nursing auxilaries, trained over a short period to undertake a small number of basic tasks.

However, many countries have found it difficult to fully implement PHC. They have also begun to question whether PHC services really can be expected to improve health—particularly whether they will lead to the achievement of "Health for all by the year 2000".

Health—a problem of definition

It is difficult to find a widely acceptable definition of "health for all. Good health is not an absolute condition. What does each of us mean by a healthy individual or a healthy community? Does the healthy person not suffer from any diseases? Does he or she experience

illness, just like anyone else, but have a low risk of dying or becoming disabled when young? Most of us would identify the healthy person as some-one who is unlikely to experience physical and mental disability and who faces low risks of premature death.

In a community of healthy people infant mortality rates would be low; average life expectancy would be long; and average growth rates of children would be fast. Few children would suffer disabilities like blindnsss or lameness. Using numbers which describe levels of illness, death or nutrition in the population (like infant morality rates, child growth velocity, child blindness prevalence or average life expectancy), we can identify populations that are more or less healthy than others. But there is no absolute value for any one of these variables which indicates good health.

We can identify countries in Western Europe which have infant Mortality Rates of 15 per thousand and others in South Asia where the rates are 100 per thousand or more. Countries with high Infant Mortality Rates will usually be described as less healthy than those with lower rates. Inside each country it will always be possible to identify groups of people whose infant mortality rates vary. Usually, it is the wealthiest families whose members have the highest life expectancy and lowest infant mortality rates. The poorest families experience the reverse. They are the least healthy. Variations in health of different population groups inside countries are found both in the "developed" nations of Western Europe and in the "undeveloped" nations of the Third World. Although national averages for health indices emphasise the extent or deprivation faced by most people in Third World countries they disguise the existence of intra-country variations.

In practice, the goal of the "Health for All by the year 2000" movement is to reduce the disability and mortality rates experienced by groups of people throughout the world to the level currently experienced by the most healthy (who are usually the privileged). This means reducing, for example, infant mortality, child and adult disability rates for countries in the Third World towards levels experienced by countries in the West. Similarly, the rates for different population groups within the countries need to be reduced to the level of the healthiest.

Effective ways for improving the health of unhealthy populations

How best can "health for all" be achieved? First we have to consider the causes of ill health among the world's least healthy populations. Many of the deaths and disabilities in population groups with high infant and child mortality rates are due to infectious diseases.

The PHC approach recognises that many of the infections which cause deaths and disability are preventable. Through intensive healh education and promotion, combined with mass immunisation, water chlorination and so on, PHC workers attempt to modify people's lifestyles. People are encouraged to take steps to reduce the contamination of their environment, lessen the number of occasions on which they come into contact with these pathogens and to increase their body defences against those pathogens which do succeed in invading. PHC also involves the regular surveillance of

groups of people who are likely to become ill (particularly children), the detection of early illness and its prompt treatment using the minimum of safe medicines.

Uncertain benefits of health education

For the last five years I have worked alongside Primary Health Care Workers in South Asia and the Middle East. Frequently I have been struck by the way in which even the unhealthiest groups of people in a population (usually the poorest) try to respond to educational messages about how they can modify their lifestyles and make themselves healthier. Families often recognise the value of, and understand, the changes being required of them. They may change their practices, but only in special circumstances, such as when in hospital or a nutrition centre. Yet, back in their own homes, they are less able and likely to alter the way they live and the practices they follow.

The people who do change behaviour consistently in response to education are usually those who have spare cash, food, time and consider the investment worthwhile. Other families do not have the spare resources to make the changes required—or even if they have the resources, do not see the point of changing. Health care workers, after delivering educational messages, may well receive challenging replies: Why should I make these changes in the hope of living a year or two more when I do not know where I will find the next month's food?" Poor people are not likely to be confident that the future has good things in store for them: this hopelessness is an inevitable barrier to adopting new "healthier" behaviour.

One example of this is found in the rural areas of South Asia, where severe disease is most common during the early monsoon months when family members are particularly busy in the fields: irrigating, ploughing, sowing, planting, weeding and so on. Time is precious —families may well consider that an hour or two away from fields during these months will have an adverse effect on the subsequent harvest. Yet it is spare time, more than anything, which is needed for nursing a sick child through a bad attack of diarrhoea—time to encourage the child to eat or drink, and time to attend a clinic to receive treatment and medical advice. During these months, too, food is in short supply. The family may not have the special nourishing foods needed by a sick child.

During the months when they and their children are more likely to be ill, poor farmers and agricultural labourers are so short of time, food and cash that they are unlikely to adopt measures which will prevent or contain illness.

It is no surprise that the people who are most at risk of being ill—or having children who are ill—are also least likely to come regularly to child health clinics for health check-ups. They may not even be able to afford to give up time at work and stay at home to wait for a health worker's visit. Regular personal health surveillance only becomes possible when people consider it worth their while to attend health clinics or to wait at home when a health worker is due to visit. Perhaps they face fewer competing demands on their time or have decided that the services provided by the clinic or health worker are really useful and beneficial.

A number of well-reported non-governmental programmes provide very popular services which are regularly attended by a wide range of people from the populations they serve. In some situations, government run programmes achieve the same results. In these exceptional cases, much of the success results from the personal commitment and organisational skill of district medical and nursing officers.

To what extent can medical professionals improve people's health?

The observations I describe have primarily been made in South Asia. They suggest that attempts to change people's lifestyles are likely to be ineffective or, inefficient ways of improving the health of the least healthy people in that region. Personal health surveillance programmes will only work if they are wanted by the people they serve—this inevitably restricts their effectiveness to the more privileged groups in society. Among poorer communities, surveillance activities are only likely to reach people if they are run by committed health workers who communicate well and inspire the people they set out to serve. They may still only have a very small impact on the health of the people they set out to serve.

These observations suggest to me that even most carefully managed new-style Primary Health Care programmes will be unlikely to lead to substantial improvements in the health of the least healthy people in a population. They will only become more healthy if their income, access to services like water or sanitation, and intakes of food improve first.

My observations have been based on a few health programmes in a small number of countries from one part of the world. But they are not unique—the kinds of constraints described are felt by health workers in other parts of the world.

Behind the "Health for all" slogan is WHO's major concern, the health of people throughout the world. But WHO is also specifically concerned with the medical, nursing, public health and allied professions, and their work. The WHO's main point of contact with member nations is with their health ministries and with medical and allied professionals worldwide. It is important that all of us make clear our personal commitment to the goal of health for all, and that we recognise that members of the medical profession can do little to help achieve this goal. Medical and paramedical professionals are well positioned to investigate the causes and consequences of ill health. However, they are rarely in a position effectively to promote improvements in the health of unhealthy populations.

By launching a campaign for "Health for all by the year 2000" WHO has issued a polemic. The concept is revolutionary—it implies that there should be redistribution of resources to the poorest by the year 2000. One professional group, on its own, cannot possibly hope to manage the revolutionary transformation required to achieve health for all. By implying that poor people's health can be improved without enabling them to increase the productive resources at their disposal or to improve their access to water, fuel, housing and so on, WHO and other international organisations who adopt the slogan might even be working against the

achievement of "Health for All".

Indeed, "Health for all" is not a realistic goal for people who are trying to plan and run basic health care services. They end up designing policies or drawing up proposals for programmes that sound good and read well, but are almost impossible to implement successfully. The plans are just wishful thinking or platitudes.

The whole Primary Health Care movement is awash with platitudes at every level, and they distract us from making a critical assessment of the issues that underlie the World Health Organisation's challenge. In the villages where they work, Primary Health Care fieldworkers are often confused and disheartened—the people they serve disenchanted. Increasing numbers of health professionals and administrators criticise the Primary Health Care approach because they are unable to make it work. But we should not be surprised that improving the health of the least healthy people in the world is difficult. We should not expect that it will be easy—or inexpensive—to provide widespread health care services, change people's lifestyles through health education or elicit people's participation in their health care. These are all political activities: they require action by groups and communities; they are concerned with the distribution of power between different groups in society, between professionals and the people they serve. The implementation of the activities embodied in Primary Health Care programmes inevitably involves conflict. Yet so much that is written about Primary Health Care ignores the financial, political and professional barriers to improving people's health and to developing new patterns of health services. In this respect, the guidance health professionals receive is often misleading, unrealistic and unhelpful. One example is the way in which health professionals are encouraged to seek people's participation in the services they provide.

Community participation: a practical possibility or more wishful thinking?

A central feature of the PHC approach is the involvement of people in the delivery of the health services they receive. Inevitably conflicts—between factions in the community, between professionals and community representatives, between funders and professionals, for example—are bound to arise whenever participation is initiated. These conflicts are faced by PHC workers, not only in South Asia, but throughout the world.

We can all conjure up the ideal scenario which is presented by some proponents of the PHC philosophy. A group of people who live in a village or street meet together, discuss their health problems, decide that they need more knowledge and skills with which to tackle these problems, and then nominate (and if necessary, elect) someone who will be sent for training as a health worker. The government health services set up a special health worker training programme. The people then evolve a system for paying the worker for his/her services and for covering costs of medicines. As a result of the information they receive from the newly trained worker, the people change their life styles, the health risks they face are reduced, then child mortality rates and other health indices change for the better. It sounds good and we would all like it to happen.

What PHC workers actually find is that the people of a particular village, street or district—the community—belong to different groups. Members of any one group may be characterised by, for example, family ties, caste status, ethnic origin or religion. Groups may be further distinguished by their allegiances to different leaders, political ideologies or established political parties. Few communities have evolved ways of making decisions by mutual agreement. In practice, the decisions that carry the day are made by the most powerful, and they are not always the group that is in the majority. If power is shared between different groups they may attempt to reach a decision by compromise. But in the end the compromise could still be elusive because opposing groups take different positions on principle.

If there is active dissent over a particular issue inside a community, professionals who automatically side with the majority viewpoint may well be met with active resistance from members of an outspoken and powerful minority. The latter may cause trouble for the elected health worker, interfere with the career of the local government doctor, and even damage property used by the health services. These political realities may influence even the most carefully conceived, fair sounding and humanitarian Primary Health Care project. Conflicts can be anticipated, even if they cannot be avoided, if those involved in designing projects analyse the political and economic processes that affect the people to be served as well undertaking a more usual study of the diseases they experience.

But it is not only the "community" that has to "participate" if people are to be actively involved in health care systems. Medical professionals will also be expected to provide support and training to nominated health workers, to heed the criticisms or to respond to the demands of community representatives, and to provide an effective back-up curative service for people who are seriously ill.

Inevitably medical professionals will have their own priorities—and their own interests (be they the discovery of rare diseases, providing a service to people who request it or simply earning enough money to survive). They will also have knowledge and skills with which to identify health problems in the community, methods for tackling them. However, the professionals' specialised view of health problems may well be different. They will suggest what they see to be the most suitable. Certainly the professional will want to adopt the approach that he—on the basis of training and experience—considers appropriate.

Consider a situation where community groups, after discussing their health care problems, reach some kind of a compromise about the kinds of services they want. The most powerful group (in a minority) has won the day with a request for a curative service which tackles problems faced by middle aged men. A less powerful group (representing a majority) has failed in its attempts to get improved curative facilities for women. The professionals responsible for providing services for the community take several different viewpoints. Some favour a preventative and educational programme. Others propose a specialist, curative programme that will meet the needs of the most powerful. Inevitably there will be conflict—both in the profession and between some members of the profession and some groups in the community.

"Health for all" or "Medical Care for all"?

I wonder whether "Health for all" really is an appropriate slogan for activities that are undertaken primarily by the medical and allied professions. "Health for all" is a vital goal for all development workers as ill-health is inevitably a matter of poverty and deprivation. Health for all will only be achieved through collective action from technicians and administrators involved in all sectors of development, and they can only do this if they have the necessary political backing. Important sectors of government which can contribute to this process include those concerned with agricultural development and industrialisation, with the provision of amenities (like water supplies and sanitation), with the redistribution of resources (particularly land reform) and with the development of the machinery of government, financial institutions and communication. Doctors, nurses, nutritionists and the like are well placed to identify "unhealthy" population groups needing priority help.

At the same time, everyone gets ill. Those of us working in the medical profession need to ensure that these medical and nursing skills are as widely accessible as possible. We can debate and try to define levels of medical care to be provided for a population, the quality of care and the accessibility of services. To do this well will need access to good epidemiological information. Our goal, for example, may be to reduce the distance between people's homes and different kinds of services, relating availability of service to the needs of the population and minimising the time people have to wait for attention when they seek help. We may also want to ensure that the services provided are of high quality and the costs that people are charged are within their means. When we are considering these kinds of levels and patterns of medical care, we are considering activities that can be put into practice by the medical profession. These are very different from the activities which might one day lead to health for all, and in which the majority of medical professionals can only play a very limited role.

If we are serious about improving the provision of medical care, we have to consider manpower issues, too. Given the limited number of medical and nursing professionals available to provide medical care in disadvantaged communities, we need to set out clearly the tasks for which medical auxiliaries should be trained. Their requirements for in-service training and supervision need to be spelt out, too. All of us have a role to play in providing good quality, relevant task-orientated training to people working at a number of different levels in medical care services.

During the planning process the medical services proposed for each community need to be debated with its representatives. Professionals involved in programme planning and implementation need to be prepared for the inevitable conflicts between different interests involved, wherever they are working. These conflicts will increase as more people are involved in and participate in their own "development".

Medical and nursing professionals working in Third

World countries need to work to spread the availability and accessibility of appropriate medical care services among all population groups—particularly the groups who are traditionally disadvantaged and denied services. This will not be easy. There are vested professional interests attempting to keep control over the availability of medical care; to profit from the illness of others; to encourage the overprescription of unnecessary drugs and to concentrate on the rare, dramatic and interesting illnesses in society. Rather than concerning themselves almost uniquely with complex issues that have implications outside the medical professional sphere, international medical organisations would do better to concentrate their efforts on promoting improved provision of curative medical care and public health services throughout the world. They need to provide maximum support to those who are trying to counter the vested interests inside the medical professions that work so effectively against the objective.

Perhaps a new operational objective for activities undertaken by the World Health Organisation, Government Health Ministries and the Medical Professionals is "Medical care for all by the year 2000". The aim should be to provide good, appropriate, accessible, effective curative care and public health services, and to train and supervise doctors, nurses and auxiliaries to provide them. This is within the context of a broad world development goal of "Health for all"—a great and important polemic that must never be allowed to dissolve in a sea of platitudes.

"The doctor well recognises the story and the appearance. He suspects it is tuberculosis. He knows the capacity of the poor—they will pay for the belief that they will get well, and as long as that belief can be sustained, they will keep on paying the same doctor. ... It will be sufficient to see that the man gets temporary relief and is kept fluctuating within a safe margin between cure and death, with an occasional dramatic rescue from death's clutches, for as long as possible."

—**Mira Sadgopal**

7

Health "Care" Vs. the Struggle for Life

Mira Sadgopal

India's people, and the world's people, are faced with a gigantic health "care" establishment. It is far from being a vacuum, a situation of "neglect" as most politicians and planners would have us believe, or sometime themselves believe. Like a huge and ungainly bureaucracy, it is both organised and unorganised. Its various parts are linked with each other in both gross and subtle ways: equally, the parts function in contradiction with each other. Some of the parts of the establishment succeed in holding sway in certain spheres by virtue of historical advantage and the forces that back them at the moment. Any group claiming to explore "alternatives" must understand human health, and likewise any other sphere of human welfare (like education, economic development, legal justice, etc.) in this perspective. The individual man, woman or child is powerless and thus always prone to being sucked, duped or dragged into the establishment system.

India provides a magnificent panorama of such a health care establishment. Most obviously, we have in this country a giant multi-tiered government-operated public health infrastructure, the bottom levels of which are organised into something called the "primary health care" system. It is topped by a spread of state hospitals and national medical institutes as well as various large central public health agencies. Ultimately, this government system is empowered through finance by international organisations and agencies like the WHO, UNICEF, DANIDA, etc.

Second in consequence is the vast body of "qualified" private practitioners which, although less organised and partially thrives on its own disorganisation, also exhibits a hierarchy of influence and power largely corresponding to the proximity of its parts to the cities and the drug industries. It includes graduates of 'allopathic" medicine as well as graduates of the ayurvedic colleges, although most of the latter depend on the use of modern allopathic medicines. The minimum requirement for the organisation to promote and protect the interests of their members as a class is fulfilled by the Indian Medical Association.

Taking third place in visibility, although it exerts the most pervasive and devasting influence, is the huge drug industry complex. There is a polarisation within this group between competing indigenous and multinational companies which is unequal, so that indigenous industry either succumbs to or adopts policies in tune with the multinationals. The multinational drug industry profoundly controls policy and practice within the government health system as well as the behaviour of private practitioners by plying central government committees and deploying a large army of medical representatives.

Fourth is a large group on the fringe of the health establishment power structure, loudly named "Quacks" by the Private Practitioners. It is a very interesting group without any real political power or legal sanction, which thrives on the contradiction of the establishment, the extreme powerlessness of the masses and the total culture of mystification which maintains this. This group finds its niche in the rural areas and the lacunae of the towns.

A fifth group exists in the twilight beyond the fringe, often indistinguishable from the masses but merging into the category known as "quacks". They cannot really be called part of the establishment, but they are quite often the first, last, and sometimes the only recourse of the poor. These are the village *dais*, the bone-setters, the *guinas*, *ojhas* and *bhagats* (faith healers and magicians). They are traditional, invisible from the belief system of the masses. The larger health care establishment has an ambivalent attitude towards this section—it is largely ignored or ridiculed. Recognising their hold over the people, some members, such as the dais, are sought to be co-opted by government training into the primary health system.

Also according to establishment values, organised health services are operated to a greater or lesser extent by large public and private industries and by the central government for its employees. These are all subject to the same pressures of the health care culture which bear on society in general and are only partially modified by local or specific political conditions. For practical purposes, we may add to this category the attempts of a number of voluntary agencies to provide proper and uniform health services in project areas.

Seeing the large interconnecting structure of the health establishment in this way gives us an intellectual idea of its magnitudes, but what does it mean for the common man and woman in India?

For a start, we can listen to the stories of hundreds upon thousands of men and women suffering from tuberculosis in our cities, towns and villages. Over and over again we can see a plot thus exposed in stark nakedness, as each tells the struggle to get treated and cured by any possible means.

For instance, a villager who gins cotton has noticed a gradual loss of weight and energy and may be, a cough for several months. But so many of the poor are already exhausted and emaciated by life—they find the line between relative health and disease imperceptibly crossed —and they think it is only "weakness". When work becomes impossible they seek quick help from private practitioners, knowing its cost, but anxious to get well and back to work. They hope to get by with a strength-giving injection, a few pills may be, and a bottle of life-giving tonic which the doctor will prescribe. So a

couple of chickens and some grain is sold to raise money.

The doctor well recognises the story and the appearance. He suspects it is tuberculosis. He knows the capacity of the poor—they will pay for the belief that they will get well, and as long as that belief can be sustained, they will keep on paying the same doctor. He also knows that this disease, if properly managed, has a good chance of continuing without cure for several years before the patient dies. Furthermore, the widespread attitude that TB is incurable, supported by the vast majority of cases which eventually end in death, and the doctor's own observation that patients cannot sustain regular treatment does not lead him to nurture any professional interest in obtaining a cure. Therefore, neither is he interested in proving the diagnosis. A private practitioner will avoid telling that he is treating a man for TB as long as possible. Otherwise he is sure to lose his patient to another doctor. Likewise, sending him for sputum test or X-ray, which may be available through the nearest government hospital, would be giving him away, or privately done would use up available funds. He is not interested in prognosis either—it will be sufficient to see that the man gets temporary relief and is kept fluctuating within a safe margin between cure and death, with an occasional dramatic rescue from death's clutches, for as long as possible.

What does the doctor's treatment consist of, aside from its psychological content? First on the list is Streptomycin injections, one daily if possible, which is more likely impossible if the patient lives far away. (He may be given tablets of Isoniazid in various proprietary preparations in place of streptomycin, in which case he is certain to be sent off with a couple of impressive on-the-spot injections, such as liver extract and red-coloured vitamin B12.) Next, he will be prescribed ethambutol tablets (under one of the marketed brand names), a second-line drug for TB which is comparatively expensive but which is being promoted by multinational companies through their medical representatives as a first-line drug. Third, a corticosteroid like betamethazone (again, under numerous brand names) will be routinely given or prescribed by most private practitioners at the start of anti-TB treatment, as it is expected to bring about rapid relief from symptoms and a specific false sense of physical well-being which may be the major factor in hooking the patient. Fourth will be a large bottle of mineral and vitamin tonic which also ironically contains something to stimulate the appetite of the person who is basically dying of hunger anyway. Fifth, a syrup will be added to suppress the cough.

The expense of the first week of such treatment works out as follows (approximately):

1. Inj. SM @ Rs. 3.00/day×7	21.00
2. Tab. Ethambutol I twice/day @ Rs. 2.50/day×7	17.50
3. Tab. Betamethazone I thrice/ day×7=21 tablets	8.00
4. Vita-mineral tonic—single large bottle	20.00
5. Cough syrup—single bottle	8.00
	74.50

The doctor's initial fee will vary, but he will also

take a daily fee for injecting streptomycin. If he is a good dramatist and psychologist, and the family is obviously prepared to pay, he may set up an intravenous drip and charge heavily.

Quite often, the person does not have enough cash to buy some of the medicines. Typically, the tonics and non-TB medicines will be bought and the anti-TB medicines will be partially or totally dropped from the list. (A survey done by Veena Shatrughna has shown that many doctors write the tonics and less necessary medicines first, perhaps to oblige the drug companies, and the specific curative medicine last. See, Health Care-which way to Go? MFC).

How long is this to go on? We have found that a doctor tells the patient initially that his treatment may take a varying period between two weeks to three months. He may decide to further prepare a mental frame work by stating that the man is lucky that the doctor has caught the "disease" at this stage because, although he doesn't have TB yet, "There is a chance of it turning into TB!"

Even if a man has collected enough funds for the initial treatment, he may not be able to follow it up. After a varying number of visits to the doctor, and especially after a marked improvement, he stops going —he may go back to work. He also meanwhile consults a gunia of his community about warding off the risks of getting TB, and after certain divination the gunia advises him to carry out certain rituals and sacrifice, which are usually done.

After some time, he again loses weight, and his cough worsens. He thinks about returning to the doctor.

The doctor's mention of TB has scared him, and he is ambivalent. He may do one of three things: he may go to another private doctor or a quack, he may go to the government doctor, or he may return to the same doctor. If he goes to another doctor, he goes with a blank slate—he doesn't mention that he has seen another doctor, or flatly denies previous treatment. Hence, a second version of his first experience is likely to unfold.

A streak of realism may hit him. He may realise that the chance he has TB is high now, and decide to see the government doctor. At least he may get a clear answer even if he doesn't have faith in the government treatment.

The government doctor is a strange kind of super man. He is invested with the power to treat when he pleases at the government's expense. (He also carries out a respectable private practice in his home at the government's expense.) A patient approaches him in fear and trembling. Diagnosis for purposes of initiating government treatment is obtained through sputum exam. or X-ray, whichever is feasible. Anti-TB treatment is started on the doctor's orders. He tells the patient he has TB, or he says, "There is a chance of it turning into TB!" depending on the role he wishes to play in the drama with the patient—government doctor or private practitioner. Sometimes he adopts a dual role, issuing government drugs from the Primary Health Centre for seeing him privately at home, too.

Government rules for the treatment of new cases of TB are clear and rational, the full treatment of eighteen months provided for under the National Tuberculosis Control Programme. After positive sputum examination,

treatment is started. Streptomycin injections are to be given daily for one month, then on alternate days for two months more. (An abbreviated schedule which is medically acceptable is 'daily × 15 days, then alternate days × 2 weeks, then twice weekly × 2 months, again totalling 3 months.) Daily Isoniazid (INH) tablets are also given.

After three months, sputum examination is to be repeated (if the patient is still coughing up sputum). There should be no more tuberculosis bacilli detectable in the sputum. Then, if not before, an X-ray screening is called for if feasible from the nearest TB, X-ray facility. The reduction in the extent of lung damage is thus monitored every six months. Six months after disappearance of the signs of damage, treatment may be officially discontinued.

If progress is satisfactory, Streptomycin is to be replaced after three months by another drug, usually Thiacetazone (THZ) but it might be Para-Amino Salicylic Acid (PAS). The PHCs dispense Isoniazid and Thiacetazone in combined tablets for the remaining period of treatment. To ensure that a patient keeps up regular treatment, he is supposed to be called every month on a particular date three days before the drugs with him are due to finish. In case he does not turn up within a few days, a printed postcard reminder is to be sent to him. If he does not respond to three such reminders (and he has not died), he is known as "defaulter,".

But what really happens to the ordinary patient, or to our village friend who gins cotton?

There are innumerable obstacles in the way that ensure failure of treatment or "default". We can list these, as follows:

1. **Problems of Diagnosis**
   - (a) sputum exam: technician not available, or refuses
   - (b) x-ray/screening facility distant, expensive, out of order, or x-ray plates not available.
2. **Failure of Communication to Patient by Doctor**
   - (a) intention, or lack of intention of doctor to inform
   - (b) patient's fear
   - (c) contradiction in the belief system in society about disease.
   - (d) doctor's impatience
   - (e) mystification of doctor's role
   - (f) poor relations/faulty communication between PHC staff
3. **Problems of Drug supply and Regular Issue**
   - (a) genuine short supply to PHC from District HQ
   - (b) siphoning off of TB drugs into the market
   - (c) siphoning off of TB drug into private practice
   - (d) incomplete issue of drugs
   - (e) doctor's failure to indent (maladministration)
4. **Problems of Medicine Cost from Market when unavailable through government supply**
   - (a) high and rising prices of essential firstline drugs, especially Streptomycin
   - (b) shortage of all first-line drugs in the market due to gross under-production.
   - (c) increase in market supply of expensive second-line anti-TB drugs like ethambutol, rifampicin
5. **Unnecessary Cost on Vitamin and Mineral Injections and Tonics and costly Cough Mixtures**
   - (a) brainwashing of doctors by medical representatives
   - (b) overproduction beyond licenced capacity of tonics, etc., by large and multinational drug companies
   - (c) mystification among the masses about tonics and the desperation for quick life-giving cures
6. **Problems of Local Arrangement to Inject Streptomycin**
   - (a) unavailability of doctor/health worker to inject
   - (b) fee for injection daily
   - (c) PHC may refuse to issue injections to patient to take home
7. **Problems of Transport**
   - (a) distance
   - (b) cost in time, energy, fare
   - (c) irregular public transport services
8. **The Social Milieu at Home**
   - (a) poverty—poor shelter, starvation
   - (b) demoralisation
   - (c) sex-bias in case of women, especially when childless or without living male offspring
   - (d) belief in magic and lack of scientific concept of disease

9. Conditions of workplace and Occupation

(a) economic exploitation
(b) noxious physical conditions, like inhalation of cotton fibre and poor ventilation, etc.
(c) lack of safety standards
(d) lack of alternatives

10. Specific Malpractices by PHC Staff and Doctor

(a) Private practice
(b) misinformation or non-information of patient
(c) failure to record (incomplete) issue of drugs
(d) neglect of monitoring schedule
(e) failure to maintain treatment card
(f) failure to contact defaulters by postcard.

It is sufficient to say that the average poor man of India who gets TB today is likely to face every single one of these obstacles, except 8(c) as he is not a woman. Inevitably, he becomes a defaulter, or he dies, or more likely both. Are there really any alternatives?

Numerous groups and individuals are making attempts to challenge the might of the establishment. The outlook of all at this point is at best, partial. Again, the problems of tuberculosis can serve as a useful reference point for illustration. We will mention a few of these efforts known to us which we consider significant.

The Voluntary Health Association of India (VHAI) is at present carrying out a countrywide investigation, with the help of a number of local and regional groups, of the widely reported shortage of first-line anti-TB drugs in the market and in the Government TB treatment centres. This effort has arisen from a couple of workshops on issues related to rational drug therapy organized in 1982 in joint collaboration with the Medico Friend Circle. During the workshop held in Jaipur in August 1982, evidence from within the pharmaceutical industry was presented by spokesmen of the Federation of Medical Representatives' Associations of India (affiliated to the All-India Chemical and Pharmaceutical Employees Federation, a non-party trade union organisation) to show that the large multinational drug companies are manipulating the supply of anti-TB drugs by producing essential first-line drugs far below their licenced capacities and promoting the newer second-line drugs which are at present imported from abroad. A number of field groups, including members of the Medico Friend Circle, members of the State Voluntary Health Associations, and local units of the Federation of Medical Representatives are collecting data to assess the magnitude of the problem and whether, as many suspect, the incidence of TB among the people is on the increase.

The first weapon against the establishment is information. A second can be formed from a "network of socially conscious health workers" (quoting from VHAI's appeal for cooperation in collecting field data on TB drugs and incidence). The ultimate weapon is a conscious movement within the masses.

As in many parts of the world, we see in India today, various attempts being made in the direction of building a conscious peoples' movement. Only thus will it be possible to really challenge the establishment on issues of health care and more important, to gather the necessary power and democratic perspective for evolving a real scientific alternative which rests on social justice. At present these initiatives are small and fragmented, particularly in the sphere of health action. Therefore they are weak in comparison to the total strength of the establishment. However, the experience steadily being built up and the link with other democratic development is significant.

On the regional and national level is the surprising example of the Federation of Medical Representatives' Associations of India, a healthy, growing, non-party-affiliated trade union organisation with a vision which is somehow startlingly free from the blindfold of narrow economism. This group's role in collecting vital information about the TB drug situation has already been mentioned.

Another regional example is that of two other non-party organizations in the Chhatisgarh region of eastern Madhya Pradesh—the Chhatisgarh Mine workers Union (CMU) and the Chhattisgarh Mukti Morcha (CMM). The CMM, an organisation drawing strength from agricultural labour is constructing a peoples' hospital and both organisations launched a joint movement in 1981 which they call "Struggle for Health". At present, understanding of health issues is crude: primarily a realisation of what is grossly wrong and a struggle against blatant injustice. Slowly and painfully these two organisations are struggling to overcome their own inadequacies, faulty habits and traditional beliefs to build up a viable and just health care alternative.

At the local level in areas where there is no established mass organization, small activities and micro-initiatives are being carried out which begin to challenge

parts of the health establishment. This has been the case with our own group. In a series of three block-level "Youth Leadership Training Camps" sponsored by the Nehru Yuvak Kendra (Government of India) of Hoshangabad, we organized groups of literate youth to study the social aspects of the problem of tuberculosis by moving among the people and listening to patients tell their stories. The campers compared the people's experience with the provisions of the National TB Control Programme and analysed reasons for the discrepancies. They organized a diagnosis camp, poster exhibition and cultural programme and a public question-and-answer meeting in the presence of the government doctor and the district TB Control authorities. Many contradictions arose which could not be resolved.

At the village level, we initiated an interesting experiment with the women of the labouring class. The male villagers of one large village had formed a labourers' union about eight months previously. One day, knowing that I am a doctor, a woman named Bhagwati suffering from untreated advanced TB dragged her emaciated frame to my door. She related a story of neglect and desperation. Her husband was an inactive member of the union, although she was not even aware of the existence of the union. Her husband Kaliram had failed to take her to the government hospital for diagnosis and she insisted that the elders in her family wanted her to die. We brought up the case in the union meeting, but were shocked to find total apathy towards her plight. The only concern was that her husband, who failed to attend meetings, was a scoundrel and a coward and not worth any attention at all. It appeared as if his wife was only an appendage of him. Until that time, no woman had been involved in the union meetings. We decided to see how the women would react to this woman's problems.

Approached individually and in small groups, the women's response, on hearing that TB is curable and the treatment provided for through the Government PHC, was spontaneous. They decided to hold a meeting of their own to build up pressure for the treatment. This they did. In the meeting I agreed to act in a supervisory capacity to see that the treatment given through the PHC was correct and was properly understood. Kaliram took his wife to the PHC and the treatment was started. At the time I was working there voluntarily on a once-a-week basis, so I was able to intervene to some extent. We trained a local person to inject Streptomycin and, on my responsibility, a month's supply was issued from the PHC.

The initial phase of treatment was stormy. Bhagwati had high fever and severe lung damage. We held an emergency meeting one night to help the family, now alarmed, to decide whether to take her to the Government TB Hospital at Chhindwara. Four women related stories of their relatives who had gone to the TB Hospital. In three cases, the victims had died anyway. The fourth person, alive and well, had gone there twenty years before when the hospital was run by a mission. Nowadays the hospital is ridden with corruption at all levels and over-crowded so that the expense is great. It was pointed out that the treatment would be no different from that she was getting at home from the PHC. So it was decided that the wisest course was to continue

to take care of her at home.

In the first ten days, one or two women began to visit her daily along with me, turn by turn. This was a hurdle for them, as Bhagwati is a Harijan and, although all the women were poor, they were nearly all non-Harijans tribals, Muslims and low-caste Hindus who were used to strictly abiding by the code of untouchability. They had never set foot on the *aangan* of Bhagwati's hut, and they had not seen her about the village for several months. It was an unforgettable sight when one woman, seeing her shrunken form on the cot, irresistably lifted aside her veil, with which she had covered her face in shame, and exclaimed, "Oh, my sister, what has happened to you!"

The women were so excited at the first two meetings that they decided to meet frequently. At their next meeting, the women who had already visited the house described Bhagwati's condition and observed that there were obstacles to her treatment at home. Her mother-in-law was being nasty and un-cooperative, refusing to give her food and continuously commenting that she would be better dead. The rest of the family was demoralised and the house was messy. I told them that it was a problem for me as a doctor to keep on giving necessary advice to improve diet and hygiene which had gone unheeded for a week. They decided to control the mother-in-law and had a lively discussion about a proper diet for a TB patient and about fixing up Bhagwati's surroundings to make the place liveable and hygienic. The next day one woman tackled the feisty old mother-in-law and convinced her to draw a truce in the battle with her daughter-in-law until Bhagwati would be fit to fight back again. Another woman sat on the edge of the cot explaining to her husband and eldest daughter what she could be fed, how to arrange that part of the hut, and how to dispose off infected sputum.

The heat was sweltering. The next day we were surprised to find that Kaliram, a bamboo worker, had woven a large overhead fan and attached a long grass rope to it. The small children were kept at a safe distance pulling the rope to and fro in turns, singing songs to the rhythm of the fan. The house was tidy and clean. The sick woman's fever was much less. She was smiling. Her mother-in-law was grumbling, but about other things, and in masked good humour. The family had got the taste of self-respect through social concern.

Recovery was steady for some time thereafter. At the end of one month, Bhagwati was anxious to get her sputum re-examined because she wanted to be able to hold her four-year-old son on her lap, and she wanted to sit-in at the women's weekly meeting. She had lost her one-year-old daughter a year previously, probably because of having infected her with TB. To collect her sputum, she scrubbed a Streptomycin vial thrice with soap and boiled it in water (so as not to kill any bacilli!) and waited for the bus on the road from eight in the morning. The eight o'clock bus did not come. The eleven o'clock bus did not come. At 11.15 she began walking in the scorching sun barefoot. The PHC was seven kms. away, and she was afraid it would close, so she nearly ran the whole distance. One hour later, she reached the PHC to find that it had closed at 12 o'clock. She waited until it reopened at 4.30 p.m. and proudly offered the vial of sputum to the compounder-technician.

He grabbed the vial and threw it on the ground shouting, "We won't do your sputum test seventeen times. Bring it after three months!". Then she asked for her month's supply of drugs, only to be told that the doctor had gone and she would have to come the next morning.

Bhagwati returned home exhausted, down-cast, but amazed at herself that she had been able to make the journey. Next day, she had fever, but she was determined to go back to get her medicines. Kaliram accompanied her. He decided in addition, to take her to the next town and get her first X-ray done and the sputum test repeated privately. When they faced the PHC doctor, they had to tolerate his sarcastic comment that they had "become big people now". All the drugs were given, but no amount was recorded on the card. In the next town, they paid Rs. 5/- for the sputum exam and Rs. 24/- for an X-ray. The sputum test was negative. The X-ray showed cavitation, but signs of active healing.

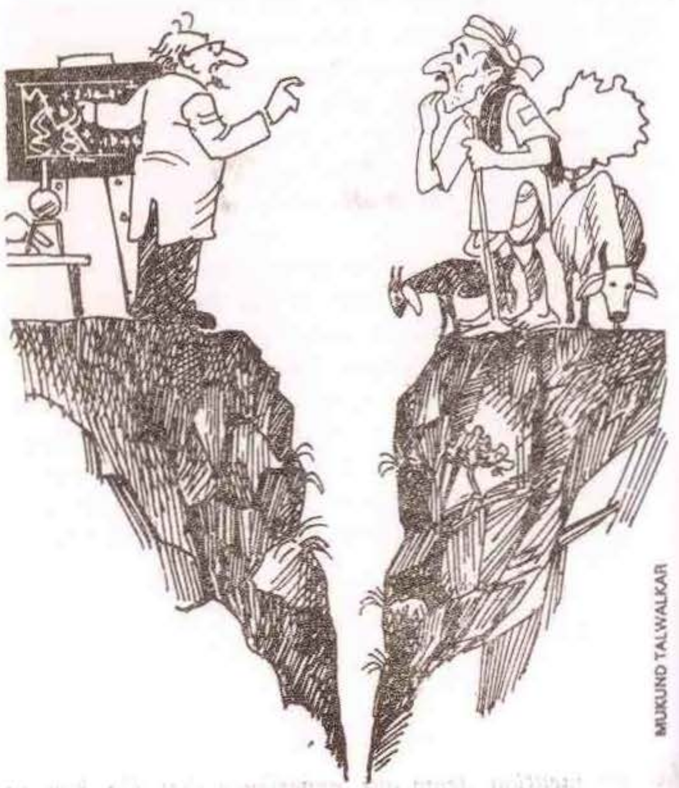
Probably because of the heavy exertion, Bhagwati was not well for about two weeks, but again began to pick up. The following month she went to a wedding and took her vials of Streptomycin and pills along with her, getting them injected by an available doctor. In the fourth month she started work again. She is a traditional dai as are all the women of her caste. An orphan, she had started her midwifery career at the age of seven, as she described to me later. In the same month, some other villagers reported to me that she was catching fish in the river with her nephew.

In the fifth month, Kaliram discovered that Bhagwati had brought back only white tablets from the PHC. Streptomycin has been discontinued, but he knew that anti-TB drugs were necessary, and she had been receiving both Isoniazid (white-coloured) and Thiacetazone (yellow-coloured) in the form of combined light-yellow coloured tablets. He took the pills back to the doctor the next day complaining, squarely that she had been given "only one" anti-TB drug by mistake. He didn't flinch when the doctor's cold gaze hit him, and after a moment's hesitation, the compounder was called and told to exchange the white tablets for the familiar light-yellow ones.

And so her treatment will go on, maybe without serious lapse until she is totally cured. Kaliram now attends union meetings when he can manage it. Bhagwati attends the women's meetings. He farms his small piece of land, and plays music at weddings. They make bamboo baskets. She delivers babies. They are people of courage, like the others. In the meetings they don't talk about TB, but of the struggle to survive and thrive against the forces of the establishment.

Let us mention from our experience that the key to growth is not in believing but in questioning. An honest doubt is worth more than thousand dogmas. Therefore, We asked—why?

—Abhay Bang and Rani Bang



8

The Other Side of Health Education

Some Experiences of Health Education in Rural Community

Abhay Bang and Rani Bang

Let us clarify in the beginning that we are not academicians in this field. Nor was our work an experiment in health education as such. We were fresh M.D.s from clinical side and we started rural health work with a view to organise people for their own health as well as other needs. During this effort we came face to face with many realities. Here we shall recollect a few of these experiences and try to understand and analyse them.

Education: A two Way process

Not knowing how sensitive is the tool of health education, in our initial enthusiasm to teach ignorant people many new and scientific things, we tumbled into the field of health education also. It is common rhetoric now-a-days in the field of health education to say that 'education is a two-way process'. There is no teacher or giver of knowledge and nobody is mere recipient of knowledge. Both learn together. But in reality usually, we the prophets of scientific knowledge, sit on a high pedestal and deliver sermons to the illiterate, ignorant masses as to how stupid they are, how they don't know anything and hence how it is now up to us to deliver these from this hell of ignorance. This is called health education. With such an attitude and relationship, obviously there cannot be a two way process of education. We are the net losers because we have lost the opportunity to learn.

When we look at our efforts in health education, we must admit that we began with this attitude. But today when we recollect the whole experience, we feel that though we cannot say whether people learnt anything from us or not, we definitely learnt a lot. Health education has definitely proved to be our education. What did we learn?

Why Do People Not Behave 'Rationally'?

In our clinical and community health work in the villages, this question always used to crop in our minds —why do people not behave rationally? Why do they not practise certain scientific advice given to them? You ask them to use latrines—they won't. You ask them to

keep roads clean—they would defaecate on it. You ask them to dig soak—pits—they would nod their heads but won't do anything. You ask women to come for antenatal check up or bring their children to under five care clinic, they won't. This always led to a sense of frustration and anger in us. We used to get annoyed with their non-compliance. But still a question used to creep in our mind—why do they behave like this?

Let us mention from our experience that the key to growth is not in believing but in questioning. An honest doubt is worth more than thousand dogmas. Therefore, We asked—why?

Raibai

Raibai Dabole, a woman of 30 years age brought her 1½ year old baby to our clinic in Kanhapur. The child had severe mal-nourishment with bronchopneumonia, obviously in very serious condition. We advised immediate hospitalisation of the baby. She stared at us. We again explained to her that the child will not survive unless she takes him to hospital and keeps him there for at least a week or more. She left the clinic with the sick child—obviously unconvinced about our advice. We cursed her—"these rural people don't understand the value of a child's life. They are callous about it, that is why children die like flies. Without bothering about children's life, they produce new babies. Thus our birth-rate and infant mortality rate both go high".

Next day this baby was lying near a public well, with convulsions. By the time we reached, the baby was dead. We didn't find the mother around. We were told that this 1½ year old was left in the care of a 4 year old elder child and mother had gone out. Our view about the stupidity of our people was further strengthened.

Next time when Raibai came to our clinic we scolded her for such utterly negligent and callous behaviour. Then she told her side of the story:

She was a widow with 3 children. Exploited and harrassed by everybody, she was leading an unsupported life. She was the only wage earner in the family and was waiting for her elder son, (7 years then) to grow up and share her burden. When we advised her to hospitalise her youngest child, she had a difficult choice. If she had to stay in hospital with the baby for a week, the two older children would starve. Older children were valuable to her because they would reach the earning-age earlier. She decided to save the older children at the risk of the youngest one's life. At the time of the death of the baby she had gone to the fields to earn her daily wages leaving the baby in the custody of the older sibling, four years old. Was it irrational behaviour?

Munnakhan

Munnakhan came to our clinic. He was found to have cardio-myopathy with cirrhosis of liver. Cause: chronic alcoholism. We admitted him to the hospital and gave him a sermon on the ill-effects of alcohol. We tried to convince him that he had already wrecked his body by alcohol consumption and he could't afford to continue to consume more. He seemed unconvinced. After improvement we discharged him and he continued his alcohol.

The question perturbed us—why doesn't he see a simple rational thing? Munnakhan told us that he was working as 'hamal' in railway godown on daily wages. There, the hamal had to load and unload wagons very fast as there was wagon shortage. In one day he lifted 500 bags of one quintal each. After such strenuous exertion, he said, the coolies had to drink alcohol to relieve tremendous body pain.

"You can't work as a coolie in godowns without drinking alcohol. We come out of godowns in the evening craving for alcohol. The extreme tiredness and pain is unbearable. Body asks for alcohol". Within few days he died.

A few days later one of us, Abhay, had to spend 3 hours in a godown for purchasing and loading grain for a grain bank programme of Chetana-Vikas. It was not summer. The godown was tin roofed and was hot like an oven. Coolies were lifting bag after bag. Within 3 hours, when he was just standing he had to remove his shirt thrice and dry it of the dripping sweat. He could not stand after 3 hours and went home for some cold drink. Now, he realised what Munnakhan had said. Munnakhan was lifting bags of 100 kg each which Abhay couldn't even move-and such 500 bags in a day. Such inhuman labour was not possible without alcohol. These human cranes were working on alcohol. Who was irrational? Munnakhan or we, who didn't see the inhumanness of such labour?

Mahakal: Latrines

Your entry into the village Mahakal—where we ran a clinic—is greeted by a paradoxical sight. There is a row of 10 pucca public latrines built by the Government years ago, on one side of the road, and women and children defaecating on the road-side just in front of these latrines. Now this sight immediataly creates an urge to deliver a health education sermon. We did it. No change. Then we realised that the people had to fetch water from about one km for their domestic use and drinking water was a precious commodity. Who would be willing to spend such a precious thing in abundance for keeping these public latrines clean? So they found it much more sanitary and clean to respond to nature's call in open where they could select a clean place, than to sit in those public latrines full of faecal material.

We also must mention two other reasons for this behaviour. We found that women always defaecate on road side. This annoys us because we have to pass through that dirt while entering the village. But women have their reasons. In the dark hours or in the rainy season, road and road sides are the only safe and dry places available.

One study has found out that women in the village have two occasions for socialisation—for talking with other women. One on the wells, when they go to fetch water and another while defaecating. Public latrines being walled from all sides deprive women of this opportunity of chit-chatting with other women. Hence they prefer open space.

Soak Pits

Kanhapur has a high prevalance of Filaria. Mosquitoes breed all around houses and wells because there is no

arrangement for drainage. So people were advised to dig soak-pits. Now the soil of Kanhapur is black cotton soil of best type. It holds water like anything. All soakpits were choked, filled and overflowing. It worsened the problem. People said that they were better off without these.

Who needs Education?

Now the question is who needs education? We talk from a scientific ideal. But the appropriate measures that we advise are often inappropriate in their situations. It is our blindness that we don't see these reasons and blame for their non-compliance.

It is our experience that we need to see the situation in which people live and understand the reasons for their behaviour before giving them any advice or health education. That is why we said in the beginning that health education is a very delicate and sensitive tool. In the absence of such precaution quite often our advice is as irrelevant as Sanjay Gandhi's. He had mugged up a 5 minute speech which he used to deliver everywhere. When he went into thick forests of Baster he delivered the same sermon to the naked hungry tribals-plant more trees!

Most of us come from a common type of background: educated urbanised, middle class life. We have our certain needs fulfilled and hence we see certain things as priorities. Cleanliness, education, health, morality and so on are what we see as priorities—we offer these to people. People don't bother and continue their own pattern of behaviour because they have their own reasons and priorities. We blame women for not attending ante-natal clinic or under five clinic saying that the ignorant people don't realise the importance of prevention. But we hardly see that poor people are in such a neck to neck struggle for survival that immediate existence is a greater priority than preventing future calamity. When the labourers eat in the evening what they earn in the day, how can a woman afford to remain absent from her work to attend an ANC clinic?

Now, while saying all this we don't mean that whatever people do is all correct. They have been applying cow dung on umbilical cord and killing the neonates (tetanus) for centuries. This is obviously wrong. But the point is, we need to see their reasons, compulsions before blaming them.

Who Needs to Change?

So the question, who needs to change?

Brecht was a German dramatist and poet. When the Russian tanks rolled on the streets of Berlin to suppress the voice of the people, he sarcastically wrote—the Party and the Government is always correct. People are stupid. This Government really deserves better people. So—instead of people changing the Govt., the Govt. should get the people changed. We are not such a Government. So, we need to change our methods and advice to quite a large extent to suit the people's life and needs.

Our action has to be comprehensive. Isolated health education and action becomes ineffective. We learnt it from Raibai. We started Balwadis and Cretches so that mothers could go to fields leaving their children in safe care. We took up issues of minimum

wages of the labourers. The increase in wages in cash didn't mean much in the face of rising prices of food grains. So we started Grain Banks. We undertook programmes like adult education, labour organisation, agricultural programmes to increase production—these are the premises of health action. Without these our health messages cannot be brought into practice by the people.

For doing this, we need self questioning instead of standard dogmas. People could be right. We could be wrong. Let us understand and examine. Another thing we need is—faith in the people. As the old Chinese proverb says: Go to the People. Live among them. Love them. Learn from them. Start with what they know. Build up on what they have.

"Arranged marriages" between health and development workers are not uncommon in the field of voluntary agencies' programmes. Development workers are secretly rather alarmed by the vagueness and vastness of their own goals of "economic justice" and "socio political awareness". So health is dragged in as an "entry-point" programme to gain the peoples' confidence and make it look as if something tangible is being done."

—**Andrew Clerk**

9

What Development Workers Expect From Health Planners

Andrew Clerk

The Word doctor comes from the Latin 'doceo', meaning "I teach". The sad lesson is that when doctors do attempt to teach ordinary village women, they are not particularly good at it. Experienced ANMs or other paramedics tend to have a much better rapport and ability to communicate. Doctors have their own language, professional pride, class identity and vested interests to maintain (consciously or unconsciously). More defensible is the situation where conscientious doctors are overwhelmed by the demand for curative medical care. and thus they have neither the time nor the space to do anything else.

Since most diseases have a social aetiology, their physiological causes are themselves symptomatic of social disorganisation or malfunctioning. Lack of food, unprotected or inadequate water, crowded living conditions, inadequate clothing or bedding deprivation of access to scientific knowledge, physical exhaustion, sexual exploitation and so on, all appear as medical statistics, malnutrition, dysentry, tuberculosis, pneumonia, neo-natal tetanus, anaemia, or venereal disease.

The medical profession is just plain lucky since it is suspected that the majority of patients eventually recover regardless of the treatment which they receive—good, bad, ineffective or none. The probable truth underlying this assertion has sustained every shade of medical practitioner from witch doctor to Harley Street consultant alike through the centuries.

The Medico-Friends Circle is one of the honourable exceptions in India to the over-prescription, vested interest, mis-diagnosis and wrongly-placed priorities of a whole profession. MFC is questioning at a more fundamental level, and in this context I want to share my own differently-biased outlook as a so-called "rural development worker". I must therefore face the inevitable question "what do you mean by development work?"

Wrong expectations?

Development work treats the poor as a class, and is concerned with changes in: *(i) Production relationships (ii) The balance of power* in rural areas and *(iii) the dignity and equal status* of the poor vis-a-vis the better

off. The goal is that of *permanent* social improvement.

Health planners exist at many different levels; the concept is used very broadly here to mean any health practitioner at the point where he or she is able to exercise *choice* over the way in which he will allocate his resources of time, skill, budget and facilities. The overall goal is to *ensure* that the state of health of a target population reaches and remains at an acceptable level.

The best example so far of the use of the medical profession to support a fundamental socio-economic analysis of society has been the family planning programme. Based on the fallacy that the poor are primarily irresponsible consumers and not gravely abused producers, doctors have put their skills at the disposal of the demographers, allowing the latter to give priority to operations and devices over economic justice and socio-political awareness. In this it is difficult to blame the medical profession which after all is licensed to practice medicine, and not to analyse society.

What therefore can we as development workers reasonably expect from medical practitioners? Must it remain true that health is much too serious a matter to leave to doctors? And what of those who put "community" in the description of what they have to offer? Presumably we can judge them according to the attainment of some sustainable standards of health in the communities concerned.

"Arranged marriages" between health and development workers are not uncommon in the field of voluntary agencies' programmes. Development workers are secretly rather alarmed by the vagueness and vastness of their own goals of "economic justice" and "socio political awareness". So health is dragged in as an "entry-point" programme to gain the peoples' confidence and make it look as if something tangible is being done. The expectation here thus raises ethical questions. Unless the doctor in question shares the same basic analysis and/or ideology as the non-medical workers, then he or she should think twice about being used as a decoy. Particularly as the whole medical services section can become bogged down in misunderstandings with the villagers.

However assuming the development workers and medical practitioners share a common analysis, then the expectations, as I see them *in the context of voluntary agency programmes*, are:

1. *To make opportunities to teach* the nature, causes, treatment and prevention of illness. This should be at a ratio of 50% of total staff working time (excluding travel and administration). Since teaching and treatment can be done simultaneously at times, since several outpatients in the queue will have the same ailment, and since the doctor himself (as suggested above) may not be the best teacher, then grouping, logical organisation, and supervision would make this goal attainable.

2. Medical staff should *appreciate the implications of working in an entity as complex as a village* or gram panchayat. Transistor radios and calculators have a wiring diagram and one can study the circuit, resistance and power input points etc. A village is so much more complex and yet if our understanding is broadly that "poverty is powerlessness", then medicine (to serve a development objective) must be directed to the poor and put under their control. Medicine is a small, but important, sub-system within the whole circuit.

3. Medical staff should *participate actively in making the link between a malfunctioning body and a malfunctioning society*. Other things being equal, a copy of the Government's "schedule of Rates" for earth work is of infinitely more worth then a homily on "balanced diet", to an undernourished labourer.

Prescribing and selling packets of vegetable seed to small and marginal farmers at the right seasons makes more sense than vitamin pills, (although both could be given where justified). Could the doctor have them on his desk?

4. If, as implied in point 2 above, *knowledge is a form of power*, and as argued initially, the doctor's duty is to see that learning takes place, then medical staff better start to prepare themselves—and by this I do *not* mean the usual box of gimmicks such as flannel graphs, flash cards and posters.

First, you need to know the labourers' lives, and from this flow a mutual respect for the way they manage in circumstances which would kill the average doctor. Next you need to ask what is their experience and ideas about a disease (assuming it is not an emergency). Good ideas can be reinforced, bad ideas can be questioned and an alternative implied by asking them about other poor people who do things differently. In particular, looking at other sections in their village, poor people can be encouraged to see the extent to which their ill-health is linked to their poverty. The medium communication is respect and not audio-visual aids.

5. The usual basis of power for poor people is organisation. The richer people have their family members in the bureaucracy and legal system, and reputedly have the police in their pockets, so organisation poses little problem. The "medical sub-system" to which we refered in 2 above, may be *a practising ground for newly organised people to try such social actions as*:

(i) Demanding the proper implementation of those government services, including public health and drinking water, to which they are entitled. (Could a conscientious doctor determine the prevalence of certain diseases as evidence to back them up?)

(ii) Organising themselves and electing one woman from every twenty or so families to learn basic medical skills (particularly child care): she should stock the appropriate remedies. This entails diffusing the power of "medical knowledge" throughout the community, and avoiding the current trend of "domesticating" one woman and paying her a stipend to be on your side, a part of your system.

(iii) Setting up a "medical emergencies fund" so that the poor do not have to turn to moneylenders in crises. This entails practising various administrative skills, discussions and mutual trust. (If those who borrowed had to repay *at the same rate* as they would had to pay to the moneylender, they would lose nothing more, learn a lot possibly including an interest in prevention, and the exhorbitant interest paid could be credited to their name as savings).

(iv) Initiating action programmes: such as child care (balwadis) at earthwork or agricultural sites (first demanding that contractors fulfil their legal obligations); ensuring that child feeding programmes are honestly managed and utilised to the best effect; looking for alternatives to occupational hazards; examining practically the whole complex of social factors which deny children their childhood, or encourage culturally appropriate modifications to house design and waste disposal.

The point is that, at least in the voluntary agency sector, doctors have a respected position in the agencies in which they serve and they could:

(a) Insist that a proportion of their time and authority should be devoted to integrating the medical sub-system into the wider quest for power.

(b) Utilise their peripatetic work pattern and credibility to carry the good news of what others are doing in other villages, and their struggles.

(c) Assemble the necessary evidence when it appears as medical symptoms, of the systematic deprivation, exploitation and harrassment from which poor suffer.

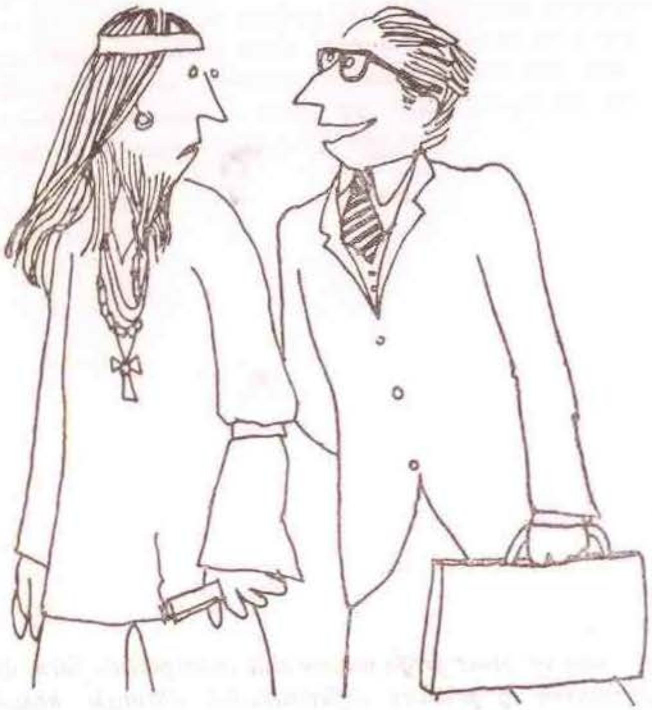
(d) Challenge rural development co-workers to spell out clearly a strategy and method of *responding to* groups of poor people in villages or areas, based on an analysis of how the power of medicine can reinforce an existing or potential movement towards change in the situation of the oppressed in those areas.

Such ambitious ideas and concepts as these are original only in the mixture which has been prescribed. The emphasis attached to certain words and phrases derives from the author's social and medical experience with voluntary agencies in India, contrasted with Nigeria, Ethiopia, Bangladesh, Vietnam, a poor rural area of America and a rich rural area of U.K. The sad or exciting conclusion is that the endeavours of doctors and development workers alike to assist *individual* poor people are no longer relevant to a quest for "ensuring the state of health of a target population", i.e. the poor as a class.

This then is the starting point: should the underlying purpose of medical work in communities be to assist in the removal of povetty? Poverty is not the lack of medical services as such, but the absence of power flowing through the veins of the poor.

"Because of their profit motive and monopolistic form of competition of product differentiation through brand names, advertising etc., these companies are primarily interested in manufacture of fancy formulations for the well-to-do at the expense of essential drugs for the vast majority."

—**Anant Phadke**



"Making drugs is more of a sideline now we've put so much research into making money . . ."

10

Multinationals in Indian Drug Industry

—No postive role to play
—Findings of a seminar

Anant Phadke

I was one of the participants of the Seminar—The Drug Industry and The Indian People—held at Delhi on 7th and 8th November 1981. It was organized by five different organizations of scientists, medicos. Substantial amount of concrete material was presented in this Seminar on how the drug industry, especially the Multinationals is deceiving, exploiting the people. In this article, I have tried to present in a somewhat coherent manner, some of the most important facts presented in different papers in this Seminar. I have also used a couple of other sources.

I bear the responsibility of interpreting the facts and figures. The authors of these papers or the organizers of this seminar may not agree with my interpretation.

Monopolistic Structure

The pharmaceutical industry all over the commercial world is controlled by a few giant corporations. "In 1974, the top 30 multinational firms accounted for 52 per cent of the total sale of pharmaceutical products in the world. In 1973, the top 20 firms accounted for over 75 per cent of the total ethical drug sales in the U.S.A. and the U.K. ... Individual enterprises tend to specialise in sub-markets leading to a concentration within product classes. For instance in 1973 according to Roche's own estimates, their two main tranquilizer formulations —Librium and Valium help more than a third of the entire world tranquilizer market."[1] These giant corporations can apply the latest fruits of scientific, technical research because they have the resources to do so. They can also set aside large sums of money to do research for newer, better drugs. But since their primary motive is to maximise their profits, this potential is not realized properly. Instead, their strength is used mainly to manipulate things to serve their narrow profit-interests. This is clearly seen if we see their role in a developing country like India.

The pharmaceutical industry in India has been dominated by the giant foreign companies mentioned above. Even after 30 years of Independence, their domination continues. In India, "while the value of drug production increased from Rs. 10 crores (almost solely formulation) in 1948 to Rs. 445 crores in 1973 and Rs. 1376 crores (Rs. 226 crores bulk drugs and Rs. 1150 crores formulations) in 1979-80, the share of MNC subsidiaries and minority ventures still remains substantial. In 1973-74, 60 firms with foreign shares accounted for 70 per cent of the country's total drug sales. The remaining 30 per cent was shared by 116 large and 2500 small manufacturing companies'"[2] Since most of the research in pharmaceuticals in the commercial sector of the capitalist world is done by giant multinationals and since pharmaceutical industry is protected by patent laws, 90 per cent of patents in the pharmaceutical industry in India are also held by these foreign-controlled companies. What are the ill-effects of this commercial profit-oriented, giant monopolistic sector ? Let us know about these one by one.

Emphasis on drug formulations

Production of bulk drugs requires setting up complex manufacturing units here in India. But foreign companies, which started here as marketing subsidiaries of their giant parents, are not interested in this. They have been forced by circumstances into manufacturing activity. But this mainly consists of importing bulk drugs from parent companies and merely mixing them together in various proportions to make various formulations with particular brand names. In 1978-79 out of a total production of Rs. 220 crores of *bulk drugs* in India, the foreign sector accounted for 16.7 per cent, whereas out of Rs. 1050 crores of *drug formulations*, it accounted for 43.8 per cent worth of formulations.[3] This affinity for formulations exists because formulations mean more profit. The average profitability [pre-tax] of four foreign companies during 1974-77 was 7 per cent for bulk drugs and 21.8 per cent for formulations.[4]

One of the main reasons given for allowing the foreign companies to operate in India is that these companies will bring their complex technology with them and thereby help set up a modern, manufactring drug industry in India. Though this has happened to a certain extent, the main effect has been to thwart the development of modern drug industry in India. Since the foreign companies are the prime movers in the drug industry in India, Indian private companies also indulge mainly in production of formulations. Thus in 1978-79 these Indian companies accounted for 22.3 per cent of bulk drug production and 32.4 per cent of formulations. The public sector however, produces 14.6 per cent of bulk drugs and only 5.7 per cent of drug-formulations.[5]

Social Waste

As we know, many of the formulations in the market are useless on account of unnecessary, wrong ingredients, subtherapeutic dosages, wrong combinations etc. It is estimated that "out of Rs 1260 crores worth of drugs manufactured in our country in 1979-80, essential and life saving drugs accounted for Rs. 350 crores only; the rest were pick-ups, tonics and formulations of marginal value"[6] The WHO, the Indian Medical Association and the Hathi Committee have recommended respectively 200, 156 and 116 essential active substance as *essential* drugs. The WHO has in addition, recommended 30 *complementary* drugs for

treating rare disorders. To this list could be added a few rational drug combinations. As opposed to these 250 (at the most) drugs, in India, about 15000 formulations are being marketed under different brand names. Most of these are repetative. An analysis of 289 manufacturing units (accounting for over 85 percent of drug-production) showed that in 1972, these units were marketing 244 multivitamin-C preparation, 262 Vitamin B complex tonics and 126 cough syrups.[7] Since none of them are better than any other, the main way of selling these brands is high-pressure advertising and marketing. This advertising pushes up the price to be paid by the consumer. "According to one estimate, as much as 18 per cent of turnover on an average is spent by pharmaceutical firms on sales promotion in India"[8] In case of foreign drug companies, this expense is even more.... "In the case of 24 foreign drug companies studied, overhead costs (including sales promotion expenditure) amounted to 33.32 per cent during 1974-77 as opposed to an average of 20 per cent in other industries."[9] These expenses are a huge social waste. They are however necessary for the drug companies for competition amongst themselves.

Irrational combinations

To justify a different brand-name, drug companies many times add some ingredients to the essential drug. Most of the times these additions are irrational. A sub-committee under the Drugs Consultative Committee stated that of the 34 categories of fixed combinations examined, 23 categories were to be weeded out. We know many examples of irrational combinations. But it would not be out of place to quote a couple of scandalous combinations. "It is well known that Analgin causes serious blood dyscrasias as well as gastric ulcers. Phenylbutazone and oxyphenbutazone are equally hazardous drugs. But a combination of Analgin and phenylbutazone achieves a record sale of over Rs. 2 crores within a year of its introduction...Amidopyrine is a very toxic drug that is banned the world over; but most of our antispasmodic combinations contain amidopyrine.[10]" In 1979-80 we imported 95 tonnes of Amidopyrine.[11] Because of their monopoly-control, leading manufacturers can dump these products into the consumer's body, doctors virtually acting as agents of these companies.

Not for the poor

Because of the brand-names, advertising, unnecessary ingredients and high profit-margins, most of these combinations are too costly for the vast majority of our population. The drugs that the poor need-drugs against tuberculosis, leprosy etc. and also vaccines are underproduced [see Table 1 and 2] because those who need these do not have the money to buy them. Even amongst the Vitamins, a similar pattern is seen. Vit. B complex preparations of various sorts consisting mostly of irrational combinations consumed by the rich account for 5.5 per cent of total drug production. However Vit. A, the deficiency of which is extremly widespread (and turns 12000 children blind every year) amongst the poor, accounts for a mere 0.3 percent of total drug production. This is even less than the production of Vit. K and other such elements ![14]

TABLE 1[12]

Name of the drug	1978 installed capacity tonnes	Production tonnes
1. Isonex	539	94
2. PAS and its salts	1290	558
3. Thiacetazone	153	13
4. Streptomycin	257	225
5. Chloroquin	176	45
6. DDS and its derivatives	38	17

WHO recommended oral electrolyte powders are hardly ever available in the market. The one that is sold maximum is Electral; but it does not conform to the WHO formula.

TABLE 2.[13]

Vaccine agninst	*1980-81 Target lakh doses*	*(estimates) Production lakh doses*
Diphth; Pertu; Tetanus	400	145
Diphth; Tetanus	250	120
Tetanus	210	70
Poliomyelitis	60	20

As against this, the drugs consumed mainly by the well-to-do or pushed by the doctors for their own interests (for example-Inj. Terramycin) have been produced beyond their licensed capacity. Table 3 gives figures for Pfizer Ltd.

TABLE 3.[15]

Product	*Licensed capacity metric tonnes.*	*Production during 1979 metric tonnes*
INH	80	52
PAS and its salts	110	94
Terramycin	14	54
Protinex	110	200

"The drug firms, when they find that the profit is less, do not use the licenses and letters of intent granted to them. It was reported that of 32 bulk items covered by 13 licenses, 21 items were not produced by Glaxo Laboratories during the last five years."[16]

Very little research for the poor

Out of a total world production of drugs of 50 billion, the developing countries in 1974 imported about 2.1 billion's worth i.e. about 4.2 per cent. But out of an estimated annual research bill of 2 billion, only 30 million i.e. 1.5 per cent was spent by the companies on Tropical Diseases which constitute one of the most pressing health-problems in developing countries. This amount is equivalent to the "cost of building a few miles of motorway" says WHO, and is less than one fiftieth of the annual expenditure on cancer research.[17] Whatever research that is being done by Western agencies on tropical diseases, takes place in developed countries and is focused mainly on the problems which they are concerned with. For example, The US Walter Reed Army Research Institute is the only Western agency doing systematic research on malaria. It got interested in malaria because of U.S. involvement in Vietnam where malaria caused more American casualties than did the Vietcong army.[18]

In India, out of 45 foreign companies identified by the Hathi committee as under the Foreign Exchange Regulation Act (FERA), only 7 companies performed R and D in the manufacture of basic drugs. An analysis of 20 multinationals in India showed that during 1974-1975, the R & D expenditue of these firms ranged between 1.5 to 2.5 per cent of their sales turnover, whereas their parent-companies in the West spend typically between 5 to 15 per cent of their annual turnover on R & D [19]. The Sandoz group as a whole spends nearly 9 per cent of its worldwide turnover on R & D, while its Indian subsidiary spent only 1.4 per cent of its turnover on R & D in 1975.[20]

The reason for this behaviour is simple. The multinationals "cannot afford" to spend on research on drugs to be used by the poor: the poor being unable to pay for the research through higher prices for new drugs. This state of affairs is not going to change unless the profit motive of the drug industry is abolished, unless human needs take priority. Drug research is now no more a virgin ground. Now it costs around 50 million to develop a new drug, more so in case of tropical diseases since in this field lot of ground-work needs to be done first. The multinationals are not going to change their research strategy unless strong public pressure forces them to do so.

MNCs not needed in India

Even the fruits of the research done in the Western countries do not percolate quickly through their subsidiaries here. This has been shown by a study by B.V. Rangarao. [see Table 4.]

TABLE 4.[21]

Name of drug	*Year of production abroad*	*Year of production in India*
Sulfadiazine	1940	1955
Sulfathiazole	1939	1955
Tolbutamide	1956	1960
Penicillin-G	1941	1955
Streptomycin	1947	1963
Chloramphenicol	1948	1957
Prednisolone	1956	1963

Out of 138 drugs listed as major pharmaceutical innovations from 1950 to 1967, only 20 were being manufactured in India in 1973. Now in the West in spite of growing expenditure on drug research, less

and less new drugs are being innovated since the scope for newer drugs is becoming less and less for the developed societies. Thus in 1974, out of the 1500 drug patents filed in 1972, only 45 (3 per cent) were "genuine new drugs," 154 (150 per cent) were "major modifications' and the remaining 1305 (87 per cent) were purely imitative.[22] This means that the post-war period of explosion of new, better drugs is over. Therefore one of the important arguments in favour of allowing the multinationals to continue here —'they bring new, better drugs'—is now less valid than it ever was.

As of today, the Indian drug industry is technically competent to produce most of the drugs that are being produced here. In 1977, there were 64 foreign controlled firms of which only 38 produced bulk drugs numbering 207. Out of these 207 bulk drugs, 93 were produced *exclusively* by the foreign companies. The Indian sector [private and public] was also producing the rest of these 237 drugs. Out of these 93 drugs *only* 29 were 'high technology drugs,' the production of which probably cannot be taken up by the Indian sector because of lack of know-how.[23] The Indian sector has the technology for producing the remaining 64 drugs currently being produced exclusively by the foreign sector. Amongst the 29 high technology drugs' some may be closely related chemical analogues. In that case, this number will go down. Further, 'high technology' has become a tricky word. The committee on High Technology constituted by the Government has in its report [October 1979] included even the following in 'high technology'—use of potentially explosive materials; use of toxic materials; careful on—line controls![24] Even in case of the drugs which cannot be produced by the Indian sector, Indian companies can enter into technological collaborations (as they have been doing currently) with foreign companies. It is not necessary to allow foreign companies to operate in India. *Thus on technological grounds it is not at all necessary to allow foreign componies to operate here.*

Pumping off money out of India

MNCs are not only unnecessary, but they also have deleterious effects on our industry and the people. Some of these have already been outlined above. In the economic field, we find that MNCs have been pumping off money out of India, firstly through repatriation of profits and secondly through a "transfer pricing."

A case study of 42 foreign drug companies showed that during the period 1968-69 to 1977-78, these companies repatriated Rs. 45.11 crores out of India in the form of profits, dividends, royalties, office expenses etc.[25] This means that though these companies earn huge profits by exploiting cheap labour in India, they do not reinvest all of it here.

Repatriation of profits is only one of the mechanisms. The other mechanism is "transfer pricing." The subsidiaries of multinationals import raw materials from parent companies at rates higher than the prices in the international market. This raises the prices of final products and thereby pumps off money from the pockets of our people into the coffers of the parent companies. A systematic study was made by Chandrasekhar and Purkayastha to calculate the amount of

money being transferred through this mechanism. In the case of the 29 foreign companies for which they could get sufficient data, they found that the outflow through transfer pricing was an estimated 20 to 40 per cent more than the outflow through repatriations during 1977.

A couple of individual examples will give a concrete idea about transfer pricing. A foreign subsidiary charged Rs. 60,000 / Kg. for dexamethasone which was later reduced to Rs. 16000 / Kg. at the intervention of the Controller of Imports. Gentamycin was being imported into India by a multinational subsidiary at the rate of Rs. 45000 / Kg. When import of some drugs was canalised through a Government agency, the price was lowered to Rs. 10,000 / Kg. Similarly the price of doxycycline was brought down from Rs. 3000 to Rs. 1500 / Kg.[27]

To summarise—Multinationals in Indian drug industry have hardly any positive role to play. Because of their profit motive and monopolistic form of competition of product differentiation through brand names, advertising etc., these companies are primarily interested in manufacture of fancy formulations for the well-to-do at the expense of essential drugs for the vast majority. For the same reasons, they are not interested in research in areas vital for our people's health. Their presence in our country cannot be justified even on technological grounds. These companies have moreover pumped out large sums of money [out of the profits gained by exploiting cheap Indian labour] into the coffers of their parent company. In the Delhi Seminar therefore, the following resolution was unanimously approved—"The multinational drug companies operating in India should be nationalized. At the same time, the functioning of the Public Sector should be improved in order to make it truly national and truly pro-people."

One cannot go here into the functioning of the Indian private sector and the public sector. But even a glance at the functioning of Indian private sector will show that it is also dominated by monopoly profit motives. The public sector has not reversed the basic trends in the drug industry in India. An analysis of the drug industry will not of course be complete without analysing the dynamics of the Indian sector. All socially conscious medicos must know the dynamics of the Indian sector also in order to know the important obstacles before a rational drug policy.

References

Unless otherwise stated, all papers quoted below were presented at Delhi Seminar. Page numbers are from the yet unpublished cyclostyled papers. Those interested, should write to—Delhi Science Forum, J-55, Saket, New Delhi-110017.

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"Most of the states in USA now allow substitution of brand names by pharmacists according to an interchangeability list prepared by the Federal Drug Authority (FDA). Only the cheapest drug is reimbursed by the government's social service scheme. Bioavailability problems are overplayed by the companies. FDA does not consider this to be a problem in more than 30 drugs."

—Anil Agarwal

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Towards a Relevant Drug Policy

Anil Agarwal

There can be no rational drug policy as long as governments see the drug issue primarily as a trade or industrialization issue. It is first and foremost a health issue. In fact, when governments see it as a health issue will it be possible to tackle the trade and industrial aspects of drugs in a sensible manner.

1. Choice of Drugs

From a health point of view, some 220 generic drugs can meet 95 per cent of the therapeutic needs of the entire world, regardless of the level of development of any country. For countries which want to give priority to primary health needs, about 100 drugs would be adequate. Cough syrups, throat lozenges, ear drops and nasal sprays are all inessential. Combination drugs are generally not needed.

The size of each national list would depend to some extent on how much foreign exchange and national funds a nation is able to allocate to drugs.

The presence of one drug on the market or within the medical system, when accompanied with the absence of another, means that a deliberate choice is being made in favour of life despite one disease and death by another. Given the socio-economic character of many disease this means that the society is choosing to save the member of one economic class while sacrificing another.

No country has dared to restrict prescribing to the small number of therapeutically essential drugs. Sri Lanka's attempt to restrict the number of drugs on the market to about 600 met with stiff resistance from:

(a) the drug companies who were afraid of losing profits, and,
(b) the medical profession which argued that its freedom to prescribe was being restricted.

The relative success of Mozambique in restricting the number of drugs on the market appears to have been facilitated by the absence of a medical profession within the country. Most doctors were Portuguese and they left the country after liberation. The importance of cost in prescribing is not taught to doctors either in the developed or in the developing world.

Even developed countries like Sweden and Norway

deal with a restricted list of about 2000 drugs in their state-run drug distribution system.

Drug MNCs are strongly opposed to the concept of essential drugs, especially the suggestion that the concept is equally applicable to developed country markets at a time when West European and North American governments are keen to rationalise health care costs. But drug companies quietly realise that the concept of essential drugs, if applied only the public health sector of the developing countries, could actually increase their markets.

2. Choice of Names

Brand names help to keep control over the market even when a product has lost patent protection.

Considerable research money is spent uselessly on producing new brand products which do not possess any new therapeutic value. In 1972, patents were filed in USA for 1500 drugs: 3 per cent were genuine new drugs; 10 per cent contained major modifications, and 87 per cent were purely imitative. Generic drugs are invariably cheaper than branded products. Therefore, drug companies strongly oppose efforts to promote prescribing by generic names. Attempts to introduce generic names have failed in Pakistan and Sri Lanka and are facing strong opposition in India. But what these companies are really afraid of is that the idea of prescribing by generic names will catch on in the West. Most of the states in USA now allow substitution of brand names by pharmacists according to an interchangeability list prepared by the Federal Drug Authority (FDA). Only the cheapest drug is reimbursed by the government's social service scheme. Bioavailability problems are overplayed by the companies. FDA does not consider this to be a problem in more than 30 drugs. Recognising the trend towards generics, the companies have started introducing 'branded generics' in the US market priced half-way between branded and generic products.

3. Bulk Purchasing

The larger the order a customer places, the lower will be the price offered: this is a common rule in the chemical industry. Most developing countries possess small markets compared to the total sales of the major drug MNCs. In fact, the annual sales of companies like Roche and Hoechst will exceed the GNPs of many developing countries. This market gets further fragmented when there are many importers of the same products, each importing a different branded product corresponding to the same therapeutically equivalent generic product.

Centralising the country's drug purchases through international tenders after doing away with (1) brand names and (2) private importers, can pay rich dividends. Sri Lanka found that its drug purchase prices went down by over 40 per cent through bulk purchasing But there was strong opposition locally: by local subsidiries of multinational corporations with the local medical profession behind them. A general rule can be pronounced—more advanced a country in local drug production, stronger will be the opposition to bulk purchasing because of entrenched vested interests.

Bulk purchasing also means relying on public sector

companies, which can often be inefficient, unimaginative and lethargic, and its lackadaisical operations can get a bad name for the concept of bulk purchasing.

4. Indigenous Production

Focussing on essential drugs is essential. For a country which focusses its manufacturing policy to these drugs, the problem becomes immensely simplified.

Most of the essential drugs are old, established drugs with patent protection having expired.

A country can begin backward integration with formulation and packaging using imported bulk drugs. Know-how for this stage is easily available. This alone can cut foreign exchange, requirements by as much as 40-50 per cent of the final packaged, imported product. But opposition can be expected from drug companies which will control supplies of bulk drugs. However alternatives sources of supply are available.

Production of bulk drugs is more sophisticated technologically but sources of technical know-how are becoming available. Many European companies know they cannot compete with larger European MNCs in selling drugs. So they are prepared to sell us know-how for manufacture. To what extent drug MNCs control supplies of raw materials required to produce bulk drugs is not fully documented. The raw materials and intermediates required by the drug industries are generally products of the petrochemical industry. Drug MNCs prefer to produce bulk drugs centrally in their parent country and undertake only formulation and packaging operations in a Third World country.

To what extent a country can force a MNC to undertake bulk drug production locally will depend on its bargaining power—a combination of the level of its political will, size of local market and knowledge of alternate sources of know-how.

Indian government policy is focussed on foreign drug MNCs to reduce formulation activities and increased bulk drug production. For this reason, drug policy is formulated in the Ministry of Petroleum and Chemicals rather than the Ministry of Health. It must be remembered that local production per se will not ensure that the poor majority will have access to drugs. Local production is basically an industrialization issue and nationalization of the drug industry is an emotive issue. From a health point of view, it is important but not of *primary* importance. Local drug companies do not behave much better, especially local private companies. Local production of drugs must fit into an overall policy of drugs from a health point of view to make it meaningful—and, I will further argue, even possible.

5. What to do when funds are inadequate

Rationalisation of pharmaceutical production, purchase and consumption may be able to lower drug prices but to meet the full needs of the people, both health and drug expenditures must increase. For many decades, therefore, modern pharmaceuticals will be in short supply and their cost beyond the purchasing power of the majority of the people. A large portion of medicinal needs at the primary health care level can be met through herbs—especially herbs which can be grown simply and easily by every family.

This strategy can reduce the need for modern pharmaceuticals for trivial reasons, even without the effectiveness of these herbs having been proved in modern scientific terms.

Every culture has its Pandora's box of medicinal herbs and practices. These ought to be studied and spread amongst the people in an organised manner. Often demystification is required even with medicinal herbs. Vietnam and China testify to the success of this strategy, especially the former.

In brief, the concepts of essential drugs, generic prescribing, bulk purchasing, local production of pharmaceuticals and use of herbs, are all measures aimed at reducing costs of medicines on the market; ensuring that important medicines are available on the market; and, making the best medical use of the available financial resources to meet the curative needs of the maximum number of people. Each measure complements the other and taken in isolation will probably not turn out to be fully effective.

The Action Areas.

What are the Obstacles?

Drug MNCs and doctors are more interested in making quick profits than meeting the health needs of the people. This is at the root of the current irrational and unsafe therapeutics.

Controlling drug companies poses few problems if we can get.

(i) a less indifferent government; and,

(ii) a medical profession that wants to be more scientific and socially conscious about its practice of medicine.

One rationale for the existence of the physician is to safeguard the ill man against wrong use of medicine. But unfortunately the physician himself has become the long arm of the drug companies, pushing (both safe and unsafe) pills unnecessarily to make quick profits himself. To get rational therapeutics practised, the medical profession must be re-educated. This will not be an easy task given the power of the medical profession.

Therefore, simultaneous efforts must be made to make the consumers of medicine better informed and demystify medicine; and, to inform them, about the irrationality in current therapeutics.

Role of Voluntary Groups

We can expect both the drug industry and the medical profession to fight this.

The role of voluntary groups like MFC which are trying to create a greater understanding within the medical profession of its social responsibility is vital. Every doctor must be made conscious of the cost of medicines; in fact, of the cost of health services itself. This will lead far more to rational therapeutics than simple criticisms of drug companies and demands for their control. I am not even sure that this is even a necessary condition. I remain convinced with all the evidence available uptil now, that a responsible medical profession is both a 'necessary and sufficient' condition for getting rational and relevant therapeutics. This is a matter of national action. Many Western and international groups, unfortunately, find themselves irrelevant for this role. Their programmes are generally restricted to campaigns against the marketing operations

of multinational companies. The information they generate will be a big help for national action, but it cannot become a substitute for national action. What can we do to make the public more aware of the depredations of doctors and drug companies? The following action points have been prepared by Dr. R.K. Anand of the Consumer Guidance Society of India and deserve our strong consideration.

1. Action at the government level:

   The Drug Controller's office for instance is a small one and remains starved of information. Though this may be a reflection of the importance that the government attaches to such problems, providing information about harmful drugs to such government agencies can hopefully get the official machinery moving.

2. Action at the international level:
   This can be done through UN agencies and international voluntary associations like Health Action International.

   The success of the campaign against bottlefeeding shows the results that can be obtained through coordinated international efforts.
3. Coordination and information exchange with national health action groups.
4. Campaigns to change the medical education curriculum.
5. Information Dissemination to Pharmacology Departments of Medical Colleges.
6. Setting up an information dissemination system for doctors—Bad prescribing practices amongst some

doctors may be simply because of ignorance, because of lack of access to adequate and relevant information. With some doctors they may be because of both ignorance and laziness, that is, they do have access to good information sources but do not care to read them; with some others, they may be because of utter callousness, because this is the best way to make quick money. A good information system for doctors would at least help those who want to help themselves.

Unfortunately all the information that doctors today get about drugs comes through industry and is commercially based. This, in fact, makes the practice of medicine very unscientific today.

But this problem can be solved. We can regularly collect information about drugs from standard textbooks and regulatory agencies like the FDA in USA, from UK France etc. (where this information is readily available) and provide it regularly to our doctors. Doctors' associations can collect this information and circulate it to their members. Doctors owe it to their patients. Yet why don't they do it? The cost would be peanuts. This is a question to ponder. (A beginning has been made by the Drugs Bulletin and Pune Journal of Continuing Health Education. Ed). It is however important to note that simply providing better information will not bring enough medicine to all the people.

7. Involve medical students in discussions on rational therapeutics.
8. Educate consumers of medicine (i.e. lay people) Educating them about the practice and practitioners of medicine, that is, attempt to demystify medicine.

The media can be used for this purpose and from all indications it is prepared to take a keen interest in such efforts. But these efforts will certainly be opposed by the medical profession and the drug companies.

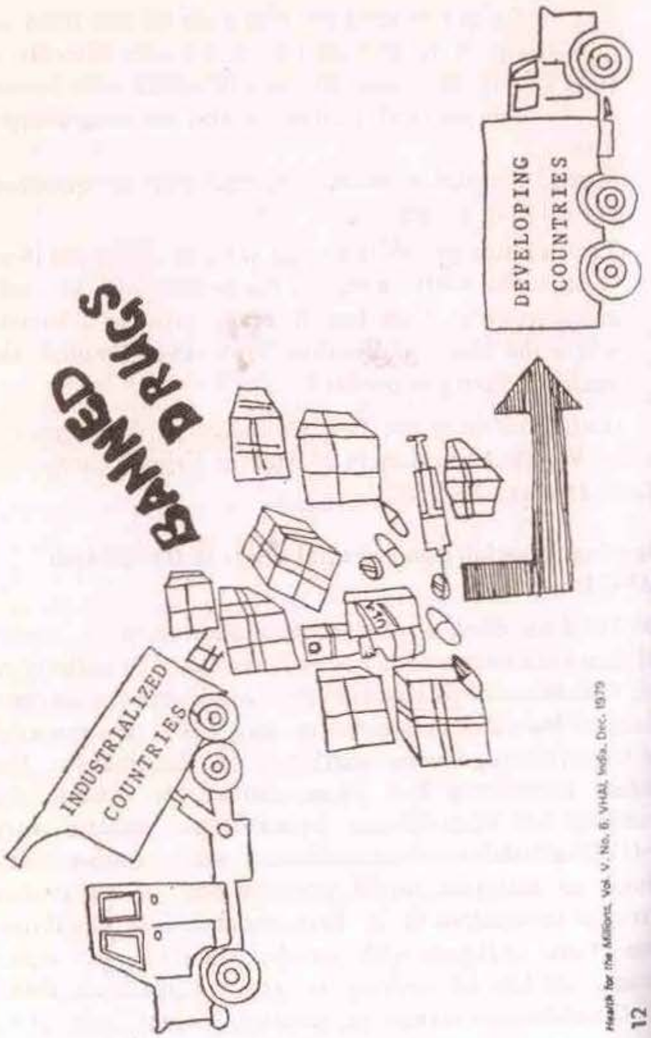
9. Spread the idea of social responsibility by questioning existing values:

The practice of medicine and sales of drugs are there to meet the health needs of the people, not to make quick profits. Can health really grow in a society where the basic motivating force even behind the health industry is profits?

(Extracted from the Talk Delivered by Anil Agarwal at the VIIIth Annual meet of Medico Friend Circle, at Tara, January 24, 1982).

Banning harmful, non-essential drugs in Bangladesh MFC Resolution

On 7th June 1982, on the recommendation of an expert advisory committee, (of which Zafrullah Chowdhury of the Gonoshasthaya Kendra was a member,) the Government of Bangladesh decided to ban 1707 non-essential or harmful drugs being marketed in Bangladesh. The expert committee had recommended 16 criteria for weeding out such drugs. In brief these criteria were —(1) Combination of an antibiotic with another antibiotic or steroids: liquid preparations of antibiotics harmful to children (e. g. Tetracycline). (2) Combination of one analgesic with another, or with any other drugs. (3) Use of codeine in any combination form. (4) Combination drugs in general, except eye, skin,



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respiratory preparations, co-trimexazole, Oral Rehydration salt, antimalarial, iron-folic acid, Vit. B' complex (eight in all) (5) Combination of vitamins with minerals, glycerophosphates liquid preparations except paediatric ones (6) Cough mixtures, throat lozenges, gripe-water, alkalis etc. (7) Over-the-counter tonics, enzymes, "restorative" products etc. (8) drugs only with a slight difference in composition from others (9) products of doubtful little, or no therapeutic value and rather, sometimes harmful, and are subject to misuse. (10) All prescription chemicals and galenical preparations not included in the later editions of B. P. or BPC.

Other six criteria relate to the selection of drugs to be manufactured by a foreign company. These criteria allow a foreign company to manufacture only those drugs which require high technology and which cannot be produced in sufficient quantity by the national companies.

Multinational drug companies and the American Govt. is putting pressure on the Bangladesh govt. to "reconsider the new national drug policy." The MNCs who control 80% of the drug sales in Bangladesh fear that other developing countries may follow Bangladesh's example and jeopardise their 30 million dollar market. The Bangladesh drug industry and the whole of its economy is dependent to a great extent (unlike India) on American loans and investments. It will be very difficult for Bangladesh Govt. to resist the pressure of the American lobby. A number of voluntary groups like Health Action International, International Organization of Consumer's Union, Penang, War On Want, OXFAM, U.K., Public Citizens Health Group

USA etc. have supported the ban and condemned the MNCs for their tactics. We passed a resolution condemning the tactics of the MNCs and the American Govt. It was decided to launch an educational campaign about the ban-order and its aftermath. [On 7th September the Bangladesh Govt. announced some concessions to the drug companies. These include removal of 41 drugs from the list of 237 harmful drugs.]

But there are indirect means to judge that doctors do overshoot. Indian literature in this regard is scarce. However there are studies available where the prescriber is informed in advance that his/her prescription will be screened for appropriateness of the drug prescribed or he/she is asked to fill up a form justifying the use of antibiotics.

—Ulhas Jaju

12

Misuse of Antibiotics and Antimicrobials

Ulhas Jaju

A medical practitioner slowly realises with time that there are really few diseases where allopathy can offer a cure. Infective illnesses is one such area. 'Antibiotic' is the greatest tool that modern medicine offers today against bacterial infections. However, it is a double-edged sword, if not utilised properly it not only harms the patient but also has wide ranging social implications, evidence of which is ample in the medical literature.

Will you call this misuse?

Antibiotics account for 20% of drug sale in India (1976 figures). Many times it is difficult to prove that drugs are being misused or irrationally used, because in majority of prescriptions, the doctor hardly ever writes the diagnosis. Even from the hospital records it is difficult to conclude correctly because written documents do not mention all that is in the mind of a treating doctor (It speaks of our recording quality.), say for example:

(i) A critically ill patient of meningo-encephalitis where diagnosis is uncertain, use of Inj Chloromycetin, Inj. Chloroquin, Inj. S/M, INH can be justified to cover up enteric encephalopathy, cerebral malaria, tubercular encephalitis and pyogenic meningitis. It is a shot-gun therapy, but is justified if one takes into consideration the seriousness of the illness and non-availability of investigational support.

(ii) A child with upper respiratory infection may have conducted throat sounds in chest which are wrongly interpreted as crepitations and thus patient is thought to have bronchopneumonia. Use of antibiotics now is perfectly justified. It may be a serious mistake on the part of the treating doctor that he did not examine after the child is made to cough, but it is a part of the game which has to be conceded.

(iii) A child with severe diarrhoea is treated with a combination of anti-protozoal (Metronidazole) and antibiotics to cover up a wide range of diarrhoeal diseases in a setting where examination facility is not available. This may also be justified if one keeps in mind that the doctor will not like to delay the treatment and risk the child's life.

(iv) If patient with fever of more than 7 days duration who cannot afford to get his blood investigations

(Widal, blood culture, peripheral smear for parasites) is put on Trimethoprim+sulpha combination to cover up resistant malaria, resistant typhoid fever, and gram negative septicaemia, this may be justified.

It all means, that the prescriptions may vary considerably in the same patient in different settings. The budget of the patient, availability of investigative procedures, error on the part of the doctor all have their say. Therefore it is difficult to rationally analyse someone else's prescription without knowing the situation in detail.

But there are indirect means to judge that doctors do overshoot. Indian literature in this regard is scarce. However there are studies available where the prescriber is informed in advance that his/her prescription will be screened for appropriateness of the drug prescribed or he/she is asked to fill up a form justifying the use of antibiotics. These trials have shown decreasing trends in antibiotic use up to 25% (1-5). In other studies where physicians have been made to write the diagnosis over the prescription, it was found that antibiotics were prescribed without any evidence of infection in as many as 62%—90% prescriptions.[6] Thus there is no doubt that antibiotics are improperly used.

How are antibiotics improperly used?

(A) Used when not indicated,

(i) For common cold and all upper respiratory illnesses which are in majority self limiting viral infections. It is estimated that as many as 12% prescriptions of antibiotics are given for common cold.[8]

(ii) For acute diarrhoea in children without any evidence of dysentry, severe malnutrition, septicaemia.

(iii) For viral infections without any evidence of bacterial superinfection.

(B) Used when contraindicated

(i) A patient of chronic renal failure gets sulpha-drugs, tetracycline, aminoglycosides (Nephrotoxic).

(ii) A new born infant gets chloromycetin (grey-baby syndrome).

(iii) A diabetic patient gets sulpha drug like trimethoprim+sulpha combination (Papillitis Necroticans).

(iv) Inj. streptomycin in a patient of ear-disease (ototoxicity).

(C) Irrational combination

(i) Penicillin with tetracycline or chloromycetin (See appendix).

(ii) Gentamycin+Kanamycin (two drugs of the same group).

(D) Improper selection of drug

(i) Use of Ampicillin because organisms are thought to be resistant to penicillin (Ampicillin does not act against penicillase producing organisms).

(ii) Demeclocyclin is used when other tetracyclines which have less toxicity and equal effectivity are available.

(iii) Erythromycin Esteolate (hepatotoxic) is used when one other salt of erythromycin (erythromycin ethylsuccinate) which is less toxic and equally effective is available.

(iv) Use of penicillin G when more acid stable preparation (Penicillin V) is available.

(v) Routine use of Inj. streptopenicillin for bacterial infection. Tuberculosis being so rampant and streptomycin being one of the cheap primary line of drugs, routine use of this combination is not justified if one keeps in mind the drug resistant tuberculous infection.

(vi) Use of Rifampicin+Pyrazinamide+INH in a case of defaulter of tuberculous treatment who has turned up for the first time to the hospital. Majority of these patients still respond to primary drugs,[9] and in our setting shift to costly drugs of secondary line is not justified.

(vii) Use of chloromycetin ear drops which contain propylene glycol as preservative which irritates the ear.

(viii) Using chloromycetin+streptomycetin combination orally for cases of acute diarrhoea (streptomycin need not be given in short-lasting bacterial diarrhoea. The common organisms are not sensitive to this drug.)

(E) Defective route of administration

(i) Use of Injection chloromycetin when patient can be given oral drug. (Injectable drug has erratic absorption).

(F) Inadequate doses

(i) Doctor prescribes dose for inadequate duration (ii) The patient does not have enough money to buy the total course of antibiotics, thus either reduces the dose or the duration. The notorious drug misused by doctors is injection terramycin which is available in a concentration of 50mg/ml. For adequate dose, 5 cc of this oily preparation has to be given to an adult which is so painful that probably patient will not come back. The most convenient way is to reduce the dose. (125 mg/ml. concentration is not generally available). It serves two purposes; one it reduces cost to the doctor and second it continues to give satisfaction to the patient of getting a coloured injection.

What are the harmful effects?

(i) Adverse reactions
(ii) High cost of the prescription (See appendix)
(iii) Resistant bacterial infection.

Gene mutation destroys affinity to larger site for the antibiotics or modifies permeability of the cell so that antibiotics cannot enter the cell and find its target site. This is the mechanism for development of resistance. However the problem of drug resistance does not remain limited to the patient. Drug resistance in an infectious organism can be transmitted to other sensitive organism of the same or different species through so-called "Resistant Factor". This drug resistance is due to ability of the bacteria to modify the antibiotics with the help of certain enzymes that they can produce. The modified antibiotics cannot recognise their cellular target and therefore have no inhibitory effect on the cell.

To make things worse, this transmissible resistance is against a series of drugs (multiple drug resistance). The fact that R factors can be transferred to every genus of enterobacteriasae through non-pathogenic bacteria like E coli (normal inhabitants of intestine) has become a major public health problem. If a person harbours E coli with R—factor in the intestinal tract, they can turn sensitive pathogenic organisms like

shigella, salmonella, V. Cholera to resistant ones. If this continues further, we may reach a situation when the future of chemotherapy can become bleak.

Evidences for this type of resistance in the Indian situation are many.[7] Studies done on healthy subjects who had not consumed any antibiotics for atleast one month showed 28% of them harboured multiple drug resistant strains of E. coli and much lower (6%) incidence of multiple drug resistant strains among individuals of nearby village. The resistance was predominantly for drugs like Sulfonamide, Streptomycin, chloramphenicol, ampicillin, kanamycin, and tetracycline which are most commonly used antibiotics. Resistance to newer drugs like gentamycin and trimethoprim has also emerged.

Why are antibiotics misused?

The possible reasons could be:—

(i) Poverty of knowledge of the prescriber
(ii) Shot-gun therapy
(iii) Antibiotics are prescribed also by doctors from other disciplines of medicine such as Ayurveda, Homeopathy, Unani etc. i.e. those who are not qualified allopathic practitioners.
(iv) Persuasive sales promotion by pharmaceuticals which are often the only source of knowledge for a busy practitioner.
(v) Easy availability of these drugs over the counter to the public who quite often practice self-medication.
(vi) Absence of cross-checks on the prescribing habits of the doctors.

(vii) Consumer is unaware of the harm that mis-use of antibiotics can inflict.

Is there a solution to the problem ?

- Refresher course for doctors on indication of antibiotics in infective disorders?
- Availability of antibiotics only on prescription from qualified allopathic doctors?
- A mandatory justification by a doctor for the prescription of antibiotics?
- Abolition of different brand names and insistence on generic name?
- Mass education of the "Consumers" about the indications of antibiotic use in common infective illnesses?

I personally feel that the last option will be most effective, if one keeps in mind that antibiotic misuse involves vested interests of both doctors and drug industry.

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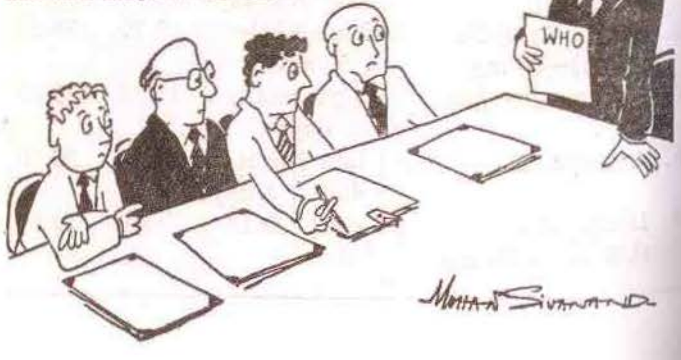
Appendix

Cost of Commonly used antibiotics

Sr.	*Drug*	*Dose*	*per tab./ cap/inj. cost*	*Total cost Rs.*
1.	Sulphadiazine (M & B)	2 tabs 3 times × 5 days	0.30	9.00
2.	Penicillin-V (M & B)	130mg 6 hrly. × 5 days	0.48	9.60
3.	Tetracycline (Paran)	500 mg 6 hrly. × 5 days	0.34	13.60
4.	Chloramphenicol	500 mg 6 hrly. × 5 days	0.31	12.40
5.	Septran (Bruxwell)	2 tabs. twice a day × 5 days	1.00	20.00
6.	Inj. Gentamycin (Lyka)—80 mg.	40 mg 8 hrly. × 5 days	10.20	76.50
7.	Kanamycin—lgm	1.5 gm total × 5 days	15.75	133.00
8.	Amoxycillin	1 tab. 3 times a day × 5 days	1.70	25.50
9.	Doxycyclin (US Vit)—100 mg	2 stat; 1 O.D. × 4 days.	1.80	10.80

"Gentlemen, first the good news—the Third World loves our report on the rice-water cure. Now, the bad news—they don't have enough rice nor water."



13

Treatment of Acute Diarrhoea in Children

M.C. Steinhoff

Diarrhoea is the excessive loss of fluid and electrolytes in stool and its treatment can be conceived as two fold:

(1) replacement of lost fluids and electrolytes—rehydration and

(2) reduction of further losses of stool—anti-diarrhoeal therapy.

The first goal or rehydration with oral rehydration solutions (ORS) and parenteral fluids has been discussed previously (MFC Bull. 47-48.)

Antimicrobials—very limited role

This discussion is concerned with the many antidiarrhoeal preparations available in this country, usually advertised as infallible, suitable for all diarrhoeas and of low toxicity. Since most acute diarhoeal diseases are both self-limited and short-lived, well designed double-blind and placebo controlled studies in which stool output or duration of diarrhoea are measured and compared are required to prove the efficacy of therapy. Tables 1 and 2 summarize selected therapeutic trials. A plus sign in the efficacy column indicates that stool outputs were clinically and statistically significantly reduced.

Table 1 presents one classification of antidiarrhoeal preparations, lists examples, describes efficacy as demonstrated in therapeutic trials and lists side effects[2],[4]. The secretion-reducing drugs are potentially useful in the secretary diarrhoeas caused by V. cholera: or toxogenic E. coli., and are all currently experimental.

Note that only ORS has unquestioned efficacy with low toxicity. ORS is the mainstay as it actually meets both goals of diarrheoa treatment.

Antimicrobial therapy may also be considered antidiarrhoeal, but since each organism must be treated specifically, efficacy data is presented by organism in Table 2. Viruses probably are the most important cause of diarrhoea in children; the organisms listed account for a minority of cases in most locales. Antimicrobial therapy may also reduce the excretion and spread of organisms and this is detailed as "effect on duration of positive culture." The antimicrobials selected here are those to which the listed organisms are usually sensitive in vitro. These antimicrobial sensitivities vary, and local patterns of bacterial resistance should be monitored to select effective drugs. Note that only diarrhoea associated with Shigella,[11] V cholerae, [12],[13] giardiasis[14] and amoebiasis[15] are unequivocally benefitted by antimicrobial therapy. It is important to note that six well designed trials of antimicrobials for uncomplicated Salmonella gastroenteritis all showed no effect of antimicrobial therapy [5-10]. Some of the more recently discovered organisms have not yet been subjected to controlled therapeutic trials.

In general a child with diarrhoea should receive ORS. Current antidiarrhoeal preparations, despite their long history of usage are ineffective or too toxic. Although most diarrhoea in children is infectious, the use of antimicrobials is currently justified only in those children who have severe cholera or shigellosis. Fortunately, bacillary dysentery and cholera are relatively easy to recognize clinically. Amoebiasis and giardiasis can be identified with simple microscopy and also respond to antimicrobials. Nonspecific or unidentified diarrhoeal disease is unlikely to improve with antibiotic therapy.

In summary, current understanding of the pathogenesis of diarrhoea and recent careful studies of therapy indicate the following:

(1) ORS is safe for all children with diarrhoea.

(2) Most antidiarrhoeal preparations are ineffective, some, such as Lomotil, are too toxic for children.

TABLE 1
Antidiarrheal Therapy

Type	*Example*	*Efficacy*	*Side Effects*
Absorbents (2)	Kaolin, pectin, attapulgite, bismuth salts.	0	absorption of antibiotics and other drugs.
Anticholinergics	Atropine, hyoscyamine	0	Salivary, ocular, and cardiac parasympatholytic effects.
Opiates (3)	Codeine, tincture of opium, Lomotil, Immodium	±	respiratory depression, coma, prolongation of shigellosis
Lactobacillus (4)	Curd	0	none
Absorption-increasing	oral glucose-electrolyte fluids	±	Hypernatremia possible
Secretion-decreasing (experimental)	Aspirin, chlorpromazine	±	salicylate toxicity, hypotension, dyskinesia

TABLE 2
Antimicrobial Therapy

Organism (reference)	*Selected Antimicrobials.*	*Decreased duration, volume of diarrhoea*	*Decreased duration of positive culture.*
Escherichia coli			
enteropathogenic	ampicillin, T/S	±	±
enterotoxigenic	tetracycline, T/S	? +	? +
Salmonella spp (5-10)	chloramphenicol, ampicillin neomycin, amoxycillin	0	0
Shigella spp (11)	T/S, nalidixic acid	++	++
V. cholerate (12, 13)	tetracycline, T/S	++	++
giardiasis (14)	metronidazole	++	++
amebiasis (15)	metronidazole	++	++

? = controlled studies have not been done in children
T/S = trimethoprim-sulfamethoxazole

(3) Only cholera, shigellosis, giardiasis and amoebiasis should be treated with antimicrobials.

The clinician's problem is that he/she cannot know the etiology of every case of diarrhoea, making therapeutic choice difficult. I think this difficulty can be eased somewhat by realizing that only a minority of cases will be benefited by antibiotics. Therefore, the clinician should use antibiotics *only in those severe cases which have a high probability of being caused by one of the four organisms mentioned above.* Thus no mild case should receive antibiotics. Cases of very frequent watery stools with vomiting which may be cholera should be presumptively treated. Incidence of cholera varies across this country and local patterns will help a decision about cholera. (We at Vellore get it in sporadic outbreaks). Severe bloody dysentery with tenesmus and fever is probably shigellosis, and should also be treated (Local patterns vary for dysentery also, amoeba are rare in Vellore). Chronic diarrhoea may be giardiasis or amoebiasis and should also be treated. These rules lead to the presumptive treatment of only a minority of diarrhoea cases.

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Cough sedatives and expectorant mixtures are probably the most commonly prescribed preparations along with tonics, and the sale of these forms the butter on the bread of quite a few pharmaceutical firms.

—Sanjiv Chugh

14

In Search of Appropriate Medicine

Cough Mixtures

Sanjiv Chugh

Cough sedatives and expectorant mixtures are probably the most commonly prescribed preparations along with tonics, and the sale of these forms the butter on the bread of quite a few pharmaceutical firms. This study was prompted by our need for a cheap and effective anti-tussive.

Indications for cough suppressants

Cough is a protective reflex which helps to expel irritant matter from the respiratory tract. Indiscriminate arrest of cough is not desirable. If the cough is due to the centre being too hypersensitive to reflex irritation from the upper respiratory tract (larynx and above) and where cough is of unproductive nature central depressants like opiates are indicated. In children sedation at night is more effective.

Utility of cough expectorants

Expectorants are used in the treatment of cough due to irritation of the respiratory mucosa below the epiglottis and respiratory conditions in which the secretion is thick and viscid needing liquifaction. Commonly used expectorants (Ammonium chloride, iodide, Ipecacunha) are supposed to stimulate output of respiratory tract fluid reflexly through irritation of gastric mucosa. For this, simple steam inhalation is a much better, effective and reliable therapy.

It must be remembered that except for dextromethorphan and codeine (centrally-acting cough suppressants) experimental proof of effectivity of other drugs used in cough mixtures is totally lacking and the rationale for their use can be debated.

With these facts in mind, we evaluated most of the cough mixtures available in the market today and found out some interesting facts.

(1) Most of the proprietary preparations available as cough remedies generally contain a central cough suppressant, an expectorant, an antihistaminic and a brochodilator in pleasantly flavoured syrupy base. Combining the therapeutically incompatible cough suppressants and expectorants cannot be justified except for the fact that it enables the pharmacy to sell their product with a good margin of profit (cough sedative is costly

due to condeine content), when sold as a cough remedy. it is interesting to note that a pure cough expectorant is not cheaper than a pure cough sedative or cough sedative-expectorant mixture. It is also interesting to note that the cough mixtures available in bulk (5 litre Jar) are only cough expectorants and these are the preparations dispensed by a private practitioner as a cough remedy in all cases of cough irrespective of their site of irritation (even if the site is above the glottis).

(2) The average daily cost of taking a cough remedy is:

Cough sedative-expectorant—	1.50 to 2.25 Rs./day (40 ml. syrup)
Pure cough sedative—	about 1.10 Rs./day
Pure cough expectorant—	1.25 to 2.25 Rs./day (40 ml. syrup)

Note:—The cost of cough mixtures with same ingredients varies as much as 50%.

(3) Many available commercial preparations contain drugs in either inadequate or excessive doses and some of them contain drugs which are outdated and no longer recommended.

These observations prompted us to evolve a sedative mixture and an expectorant mixture containing only the required drugs in adequate dose in a palatable base and which would be reasonable priced. As we have no access to the required drugs in their powder from which are available only in bulk, we arrived at approximate cost by using tablets available in the market, so that cost computed by us is necessarily higher than it would be for the drug companies who buy the drugs in bulk in their powder form. Still a difference can be made out between the market price of commercial preparations and the cost of the mixtures as prepared by us using tablets bought in retail.

How to prepare cough mixture:

(1) *Cough sedative*

(i) Crush and make into powder
(a) 10 tablets of codeine phosphate
(100 ml.) (10 mg.—6 paise each)
+ (b) 5 tablets of ephedrine HCI
(30 mg.—1.5 paise each)
+ (c) 5 tablets of chlorpheneramine maleate
(4 mg.—2 paise each)

(ii) Dissolve the powder in warm water and filter.

(iii) Dissolve 6 heaped teaspoonsful of sugar
(66 gms. 20 paise)
in ½ cup of boiling water and add 1 drop of pineapple flavour.

(iv) Add 0.5 gm (flat teaspoonful) of Na benzoate as preservative to the filtrate and mix well with sugar solution to make it 100 cc. total.
(1 teaspoonful flat=2.2 gms.)

Dose: 10 ml/6 hrly for adult
5 ml/6 hrly for children
Cost 56 paise per day.

(2) *Cough Expectorant (100 ml.)*

(i) Crush and make into powder.
(a) 5 tablets of chlorpheniramine maleate
(4 mg.—2 paise each)

(b) 5 tablets of ephedrine HCI
(30 mg.—1.5 paise each)
(c) less than one flat teaspoonful of ammonium chloride (3 gms—3 paise)
(1 TSF flat=4 gms)

(ii) Dissolve in hot water and filter.

(iii) Dissolve 6 heaped teaspoonful of sugar (60 gms—20 paise) in ½ cup of boiling water to which 2 drops of pineapple flavour are to be added.

(iv) add 500 mg (¼ teaspoonful flat) of Na benzoate as preservative to the filtrate and mix it with sugar solution to make 100 cc

Dose: 10 ml/6 hrly/day adult.
Cost: 16 paise per day.

Remember Na benzoate is added to avoid fungus overgrowth. Those who wish to utilise the drug within 48 hours, need not add the preservative. Please preserve in clean container to avoid fungus overgrowth.

A look at any drug directory will show that there are dozens of companies producing herbal and herbomineral drugs.

—**Kamla S. Jaya Rao**

15

"Allo-Ayurvedopathy" A non-scientific Hybridization

Kamala S. Jaya Rao

A look at any drug directory will show that there are dozens of companies producing herbal and herbomineral drugs. The drugs are perhaps manufactured according to ayurvedic or other non-allopathic principles of therapeutics. The drugs are however not marketed as traditional pills ("goli"), lehyas or powders. They are marketed as tablets or syrups, a common mode of manufacture of allopathic drugs. Obviously, the manufacturers as well as the practitioners appreciate the case of dispensing and consuming drugs in this form.

With the wide marketing of such drugs certain disturbing trends are becoming evident. The drugs are generally compounded only from herbs. However, there is a small proportion where they are being mixed up with allopathic drugs. Examples are given in Table 1. It is not known whether any work has been done on either the potentiating effect or adverse effects of one group on the other. It is not known whether the Drugs Controller has approved of such drugs. The question arises, is this for use by traditionalists (the term traditional is used here to include all traditional systems using herbal medicines like Ayurveda, Unani, Siddha etc.) or by allopaths or is it the country's idea of integrating allopathy with traditional systems?

Although this cannot be condoned, by itself we may try to ignore it. (The so-called quacks are anyway using allopathic drugs like aspirin pencillin, quinine, etc.) More serious, in my opinion, is the fact that some of these are being used nonchalantly by allopaths. Mostly these are used for infective hepatitis, urinary calculi and piles. Is it because deep-rooted within us is the "ayurvedic" culture; is it because of the wide advertising (eg; Vinkola-12, Liv 52, Raktadoshantak, Jammis Liver cure) or is it because these companies also employ persuasive medical representatives?

I have no ready statistics regarding how widely these drugs are used by allopaths. One company, The Himalaya Drug Company, published two journals-Capsule and Probe. From this, one can get an idea and I therefore, use it as an example. The drugs are used by private practitioners, doctors in general hospitals and in teaching hospitals. The drugs of this company have been used in teaching hospitals from Kashmir and Kerala, if

one believes reports from Capsule and Probe. The medical institutions include B. J. Medical College, Pune; Osmania Medical College, Hyderabad, Tirupati Medical College; Bunkura M.C. Bengal; Institute of Child Health, Madras; SMS M.C., Jaipur, to name only a few.

Hybrid Herbal drugs

TABLE 1

Name	Ingredient
1. Spasmolin (Addco Ltd.)	Ephedrine, Caffein, Tinc. bellandona, vasaka, long pepper, kantikari, Bamanbati, Nagaswar, 7-10% alcohol
2. Vinkola—12 (Standard Pharma, Ltd)	Ferrous salt, Copper Sulphate, B-complex vitamins. Drakshrista, alcohol 10%
3. Malaria tablets (Baidyanath)	Quinine, godanti bhasma

What if these drugs are used? Yes, what if? I gave the composition of three drugs; these are chosen because all 3 have been used on children, by allopaths (Table 2). Do the allopaths know the theraupetic and toxic properties of all these ingredients? The allopaths boast of a "scientific system" of medicine. Have proper drug evaluations been carried out on these preparations. If not, are the allopaths who used and use these drugs quacks or are they indifferent to what happens to their patient?

Do we know anything about drug evaluation and clinical trials? Are we taught these in our pharmacology classes?

(a) How is a new drug tested (b) When it is ready for a clinical trial (c) How is a clinical trial to be conducted, etc.

TABLE 2

Name	Ingredients
Liv 52	Achillia millefolium, Capparis spinosa, Cassia occidentalis, cichorium intybus, Terminalia Arjuna, Tamarix gallica, Solanum niger, mandur bhasma.
Bonnisan	Achillea millefolium, Capp. spinosa, Cass. occidentalis, cich. intybus, Phyllanthus embica, Tamarix gallica, Term. Chebula, Tinospora cardifolia, Tribulus ferristus, long pepper, cardamom.
Geriforte	All ingredients of liv 52 plus— Term. chebula, asparagus ascendes, Asp. racemosus, casesalpinia digyna, withinia somenifera, Glycyrrhizza glabra, centella asiatic, Mucuna pruriens, Myristica fragrans, Eugena caryophyllata, Carum coptilicum, berberis aristata, Eclipta alba, Argyreo speciosa, Celastrus paniculatus, Adhatoda vasica, long pepper, mace, Cardomum, Shilajit, Chyavanaprash, Abrak bhasma, Loha bhasma Jasad bhasma, Kesar, amber, makardhwaj, haldi.

One may say that herbal medicines are being used in allopathy—for instance serpasil, digitalis, belladonna etc. So what is the harm in using others. Firstly these are mostly single principles isolated from herbs and secondly, they have been tested according to principles of pharmacology. I do not question the efficacy of the marketed ayurvedic drugs in treatment of particular disease. I wish to emphasize that their use by allopaths is quackery and at best, unethical. The results of these trials are even published in regular medical journals! (Pediatric Clin. India 10:157, 1975 and Indian Pediatrics 14:197, 1977).

"*Pulse strategy, based on the responsibility of health institutions for immunization of local children, is likely to achieve better coverage because the vaccine is taken to the children, rather than vice versa.*

—Vineet Nayyar, L Sharda

16

Appropriate Strategy For Childhood Immunisation in India

Adapted from a series of three articles of T. Jacob John and M.C. Steinhoff

Vineet Nayyar and L. Sharada

One-sixth of the world's children are in India. Measles, whooping cough, poliomyelitis and other immunizable diseases continue unabated and are the major causes of morbidity, mortality and deformity. The current system of vaccine delivery has not achieved adequate coverage. Of over 20 million children born in India, only about 6 million received their first dose of DPT[1], whereas the rest (14 million=70%) remained unprotected. These facts necessitate a fresh look into our immunization strategy. The techniques and tactics of immunization developed elsewhere may not be suited for our conditions. Hence, there is an urgent need to evolve a strategy that is approriate for our conditions.

Recent experience with small pox vaccine has taught us some important lessons. A shift from the traditional strategy of systematic vaccination to surveillance and containment vaccination resulted in the eradication of small pox[2]. The first step in this achievement was the assigning of high priority to the elimination of small pox. To proceed, therefore, with the problem at hand, it is important to assign priorities for vaccines in order to achieve the maximum benefits. A simple and realistic method of doing so is suggested, using available information.

A. Priorities

The overall importance of a vaccine in a country depends upon:

(i) The characteristics of the disease to be prevented, including both the incidence and the sequelae.
(ii) The effectiveness of the vaccine.
(iii) The safety and relative risks of the vaccine,

Each vaccine can be evaluated thus and scores given. Vaccines can then be arranged in the order of priority according to the total scores. This has been done in Tables 1 and 2.

Diseases with a higher incidence e.g. tuberculosis, or serious consequences e.g. poliomyelitis or both e.g. Measles and 'whooping cough', receive high marks. Similarly, diptheria, tetanus, measles, small pox,

TABLE 1

Vaccine	Need	Efficacy	Safety	Product of the three
Diphtheria	1	4	4	16
Whooping Cough	3	2	2	12
Tetanus	3	4	4	48
Polio	4	2 or 4*	4	64 or 32
T.B.	4	1 or 2	3	24 or 12
Small Pox	0	4	2	0
Measles	4	4	4	64
Typhoid	2	2	3	12
Cholera	1	1	3	3

*Depending on 'cold chain'.

TABLE 2

(1) Measles	(4) T.B.
(2) Polio	(5) Diphtheria
(3) Tetanus	(6) Whooping cough

rubella and mumps vaccines are very highly efficacious with protection rates of over 95% and therefore score 4 marks for efficacy. A vaccine causing very little unpleasant reaction, and no risk to health or life e.g. Measles, diptheria, tetanus, and polio, get the maximum marks for safety.

From the Tables, it would appear that measles, polio and DPT vaccines are the most important ones for Indian children. Therefore, it is recommended that these three should be considered the core vaccines for routine use. There is low priority for typhoid, mumps, rubella, tuberculosis and cholera vaccines for routine use, although a more efficacious tuberculosis vaccine, if discovered, would call for a revision of priorities.

Having thus sorted out the vaccines rationally, we are in a position now to examine current practices, and to suggest alternatives in our immunization policy.

B Immunization Schedule

Too many conflicting and confusing schedules are recommended by different experts for the immunization of our children 6 to 11. Most of them recommend measles, poliomyelitis, diphtheria, pertussis, tetanus, BCG and small pox, but opinions vary regarding the number of doses and timing of these vaccines. The country needs a single schedule reflecting national policy. The adoption of a single, realistic and need-oriented schedule will provide a firm framework for health care personnel to apply a uniform policy for teaching parents and immunizing children.

In formulating the schedule, epidemiological, immunological and logistical considerations are relevant. Epidemiological information has already been utilized in identifying the vaccines necessary for routine use. Immunological data suggest that 5 doses of OPV are necessary to protect 85-90% of infants and children from poliomyelitis in India. It is obvious that these 5 doses are necessary prior to the period of maximum risk i.e. 7 to 12 months of age. Similarly, on immunologic grounds measles vaccine should be recommended at or after 12 months of age and not earlier. For logistical reasons too, 12 months appears to be a better age than 9 months as recommended by some schedules. Again, for logistical lessons, there is a need to minimize the no. of visits to achieve maximum acceptance. Both DPT and OPV should be administered together at a single visit, starting at 1½ months, so that the child is immunized against these diseases by 6 months of age.

Most of the recommendations for booster doses are based on conjecture or schedules deployed by other countries. In our communities, because of more intense circulation of various infectious agents, it is not inconceivable that booster doses may be unnecessary. Specific data on the benefit of one or two booster doses is, however, lacking.

Unfortunately, current immunization schedules do not seem to take any of the above mentioned facts into account, and recommend as many as 20 visits at varying intervals for complete immunization. Equally distressing is the fact that higher priority items like measles and polio vaccines are still imported although the manufacture of polio vaccine in India, is expected to commence a very soon.

Presently two factors impose severe limitations on the usefulness of a schedule as a tool to achieve systematic and wide coverage of immunization—

(i) Parents should be well informed about the schedule, and be highly motivated to bring their healthy children for immunization to an institution usually meant for treatment of the sick.

(ii) The institution should procure vaccines and store them throughout the year.

Therefore, it is necessary to consider alternative, appropriate, community-based strategies of achieving high immunization rates. Such new strategies should not be bound down by an inflexible immunization schedule, but should be free to modify it, in order to improve immunization coverage.

C. Community-Based Annual Pulse Immunization

Recommended here are merely the modus operandi for the government to make available a minimum number of well chosen vaccines to every child in the country. This strategy is an indigenous adaptation of the mass immunization approach in contrast to the conventional strategy of clinic based sporadic immunization. The latter has been successful in developed or authoritarian and highly disciplined or small countries but in India, it has failed to make a meaningful impact on the incidence of any disease. On the other hand, pulse strategy, based on the responsibility of health institutions for immunization of local children, is likely to achieve better coverage because the vaccine is taken to the children, rather than vice versa.

For reasons already discussed, a national programme of routine minimum childhood immunization should choose vaccines of high priority and established need and efficacy. The need is to protect every child against poliomyelitis, measles, whooping cough, diphtheria and tetanus[13]. It would take 5-6 doses of oral polio vaccine, one dose of measles vaccine and 3 doses for primary plus one booster dose of DPT

per child to achieve this. In order to give these inoculations in the least number of encounters between children and health care workers the schedule has been simplified as shown below—

Planning for the annual pulse will be done at district and local community levels. The district level planning will include the arrangements for obtaining, storing and delivering the necessary vaccines. A central vaccine store will be required to store vaccines and to dispatch them in cold boxes with ice to the peripheral points. Other materials such as syringes would also be managed at the district level. In addition, the organisation and deployment of vehicles for transport of staff, vaccines and other materials will be managed at the district level. By staggering the dates of immunization in different communities, a supply of cold boxes and syringes may be used repeatedly, making the operation economically viable.

Under the new scheme, unnecessary storage of costly vaccine, sometimes beyond the expiry date, under unfavourable circumstances existing in peripheral institution (e.g. PHC) would be avoided. The vaccines would be supplied fresh and in keeping with the demand; wastage would be avoided. This system of dispatch of vaccine requiremements from a central store, eliminates the weakest link from the cold chain, and makes materials management simpler.

Planning at the peripheral level would be done by PHC staff, VHW and community workers, who would arrange the time and place of vaccination, children eligible would be transmitted by a house visit, followed by tom-tom announcements, 2-3 days before the appointed day. Immunization cards would be distributed to mothers of eligible children at the time of house visit. These cards would be collected from the mothers at the time of inoculation, and redistributed prior to the next 'pulse'. This will be repeated till the child is completely immunized, after which the cards serve as the family-retained record of immunization. These cards also make it easier for mothers to come with credentials and for the staff to make entries in the register.

The number of prospective recipients are classified as infants, one year olds and eligible recipients in school. The "local planners" transmit this information to the central stores and procure vaccines in sufficient quantities immediately prior to the campaign. The 'left overs' are returned to the central supply agency without delay.

In this strategy, the parents are given appointments; eligible children identified, counted and brought in clusters, so that even reluctant mothers tend to join in. The venue of immunization is so chosen, that large numbers of mothers can come quickly and return without delay. The decision of the mother will not be complicated with if, when, where and what vaccine; it will be a simple yes or no. One member of the team should be available the next day to examine children with fever: this will reinforce the confidence of the community in the team.

The assembly of mothers and children may also be used for health purposes other than immunization of children. The contact of the local health staff and village level workers with the community will increase.

Such reinforcements will tend to contribute to the development and popularity of the local health service institutions.

'Pulse immunization' with OPV induces better sero-response than with sporadic immunization[14]. This is presumably due to the spread of vaccine virus in the community. Pulse vaccination for seasonal diseases like measles and pertussis can be given prior to the season of high incidence so that immediately afterwards, the community will immunologically resemble a post epidemic population. Measles and pertussis are unlikely to reappear before the next annual 'pulse'.

The above mentioned system is a "vertical" programme consisting of the deployment of a network of personnel to deal with disease, particularly its prevention. If, on the other hand, immunization becomes the assignment for a particular period of time for the staff of health care institutions, it becomes a vertical programme within a horizontal one. Such integration is economically more feasible and philosophically more sound.

D. Epilogue

We would like to encourage the application of 'pulse immunization' by government and non-governmental agencies combined with evaluation. Evaluation should include both coverage rates and the impact on the incidence of immunizable diseases especially whooping cough, measles and polio-myelitis.

We have used this system to administer OPV in about 200 villages and have been convinced of its feasibility and the high coverage achieved. Many health centre mobile teams and non-governmental organizations have found enthusiastic responses when they have taken DPT or other vaccines.

We believe that only where the conventional clinic-based immunization is supplemented by the suggested community-based immunization, will a more fuller coverage be achieved.

Refereces

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"*Even with limited financial resources, proper health measures and improved rural and female literacy are possible and that these may aid improving child health and child nutrition.*"

—Kamla S. Jaya Rao

17

Kerala: A Health Yardstick for India

Kamala S. Jaya Rao

This is based on an article published by P.G.K. Panikar, Institute for Development Studies, Trivandrum[1]. The paper shows that judged in terms of conventional health indices, Kerala stands out from the rest of India. The paper tries to analyse the possible reasons for this. It shows that 'given proper policies and priorities, lack of resources need not be an impediment to improvement of health status. Following the presentation of Panikar's data, I have tried to analyse the nutritional status of Kerala's children and its role in child mortality.

The Crude Death Rate, Infant Mortality Rate (IMR) and Toddler Mortality Rate are considered to be important indicators of the general health status of a community. With lack of protected water, poor sanitation and inadequate medical care, morbidity and mortality in rural areas are high. Therefore, the level of health indicators of the rural population would give a more accurate picture of the health status of a country like India. National averages not only mask the wide variations between states but also mask the differences between the rural and urban population.

The Crude Death Rate in India is 16 per 1000; it ranges from 8.5 in Kerala to 22.0 in U.P. The rate

TABLE 1

Crude Death Rates in India

	Rural	*Urban*	*Total*
Kerala	8.6	7.4	8.5
Punjab	12.2	8.9	11.5
Haryana	12.9	8.5	12.2
Karnataka	13.4	7.7	11.8
Maharashtra	13.7	9.2	12.3
Gujarat	16.0	11.4	14.8
Bihar	16.0	11.2	15.5
A.P.	16.9	10.5	15.8
Tamil Nadu	17.0	8.7	14.5
Rajasthan	17.3	9.1	15.8
Assam	17.7	9.7	17.0
Orissa	18.4	11.3	17.9
M.P.	18.6	10.9	17.5
U.P.	23.0	13.5	21.8
All India	17.3	9.8	15.7

among the rural population is higher, sometimes almost twice that of the urban population (Table 1). The difference is hardly much in Kerala.

IMR in India is about 120 per 1000 live births. In Kerala it is only 64. Although this is much higher than in developed countries, it is the lowest in India. U.P. has the highest IMR of 179 (Table 2).

TABLE 2

Child Mortality in India (Rural)

	Infant Mortality	*Underfive mortality*	
	Rate	*Rate per 1000*	*Percent of Total Deaths*
Kerala	61.4	24.0	39.0
Haryana	79.0	34.2	50.9
Punjab	99.1	37.0	46.1
Maharashtra	101.2	45.1	47.7
Karnataka	102.0	46.4	47.5
Tamil Nadu	112.5	53.7	42.8
A.P.	118.9	47.1	43.4
Orissa	133.7	59.6	—
Assam	137.9	46.7	49.2
M.P.	141.4	62.5	—
Gujarat	146.8	71.9	59.5
Bihar	152.4	36.6	—
Rajasthan	162.6	77.5	30.4
U.P.	179.0	86.4	59.2
All India	138.3	61.7	53.2

The mortality rate among children under five years is disterssingly high in India. It ranges from 24 in Kerala to 86.4 in U.P., with a national average of 62 per 1000 (Table 2). According to Panikar, if the under-five death rate for the whole country were to drop to 24 (the rate in Kerala) the crude death rate will come down from 16 to 12. This argument may not be completely correct. Though the under-five death rate is low, as can be seen from the Table, the proportion of deaths is this age group compared to total deaths is still very high. It appears that the rate has fallen down because the crude death rate has come down. If the crude death rate in the country were to come down to 8.5, under-five death rate will come down to 28 from 62. Therefore, the fall in childhood mortality appears to be due to general improvement of conditions. In Kerala and not particularly due to improvement of child health.

The expectation of life at birth in India is 50 years for males and 49 for females. In Kerala it is 61 and 62 years, respectively. Note the longer life expectancy of females in Kerala.

Kerala is one of the economically backward states in India (Table 3). Yet, 100% of Kerala's total expenditure is on medical and health services. In most other states it is 6-8%. There are, however, some states where the expenditure is higher, despite which mortality rates are high. The doctor-population ratio and bed-population ratio in Kerala are also not the highest in the country (Table 3).

What makes Kerala's achievement in the health field particularly significant is that the rural population enjoy a much better health status than even the urban population in several states. Even in 1965 57% of Kerala's hospitals were in rural areas. In most other states this was only 22-38% (Table 3). But, the mere presence of hospitals in rural areas does not bring down death rates. The proportion of rural hospitals is equally high in

TABLE 3

Measures of Medical Facilities in India

	Per Capita State Domestic Product (Rs)	*Per capita Expenditure on Health (Rs)*	*Population served by one doctor*	*Beds per 100 Population*	*Per cent Hospitals in rural areas*
Punjab	1190	8.32	5863	77	10
Haryana	924	8.67	—	56	—
Maharashtra	839	8.85	2592	68	4
Bengal	814	8.81	1747	90	32
Gujarat	791	9.28	4900	43	22
Tamil Nadu	691	8.65	1988	70	61
A.P.	600	9.09	4922	45	26
Kerala	573	6.93	4742	92	57
U.P.	573	7.88	7672	39	35
Karnataka	554	7.85	5300	85	23
Rajasthan	554	11.06	12662	51	39
Assam	554	9.09	3139	44	27
M.P.	530	10.62	21663	38	28
Orissa	511	8.24	7008	38	57
Bihar	443	6.62	6083	26	27

Orissa and Tamil Nadu but the death rates are nearly double.

Panikar points out the obvious—that more than the availability of health services, it is the extent of their utlisation that really matters. According to him the success of Kerala is due to the fact that as much emphasis is given to promotive and preventive measures (such as provision of protected water, massive campaigns against communicable diseases, public health education using all media of mass communication, etc.) as to curative medicine.

Good antenatal care, a high proportion of institutional deliveries and infant care through home visits by ANMs have contributed to the low maternal and infant mortality. Other important measures are triple vaccination, distribution of iron-folic acid tablets to pregnant mothers and antenatal immunization against tetanus. While the female population of Kerala is 4% of the total population in India, maternal deaths in Kerala account for only 1% of total maternal deaths in the country.

Panikar argues that the health consciousness of the public is an important factor in the utilisation of health programmes. Kerala's literacy rate is as high as 60% compared to the all India average of 30%. In 11 States it is less than 30 and in 10 others it ranges from 30-40. Rural literacy in Kerala is 59%, in 10 States less than 25% and in 10 others between 26-32%. More significantly, female literacy is very high in Kerala. Rural female literacy is 53%. In 20 States, it is less than 20%; in U.P., M.P., Rajasthan and Bihar it is 4-7%. Apart from governmental efforts, the matrilinear system of inheritance might have significantly aided rural female literacy in Kerala. Panikar suggests, perhaps rightly, that the high general literacy and education of the females may have contributed most to the improvement of the health of infants and children in Kerala.

Though childhood mortality is the lowest in Kerala, it is still very high. Also while the under-fives form only 15% of the total population deaths in this group, as mentioned earlier, account for nearly 40% of total deaths. Why is child mortality still very high in a state with an otherwise impressive health record? Two factors mainly govern childhood mortality in developing coutries—infections and nutrition.

Unfortunately, I am unable to get a state-wise break-up of the incidence of infections in Indian children. I have, therefore, considered the data available for the whole population regarding the two most common childhood ailments, namely, diarrhoeas and respiratory diseases. The incidence figures in Kerala are much lower than in other States (Table 4).

When it comes to nutrition, Kerala is in very bad shape. It has one of the lowest energy and food intakes in the country. While the mean caloric intake of adults in other States is 2000 or more, in Kerala it is around 1,800. Kerala also has the lowest intakes of iron, Vitamin A and Vitamin B-Complex. Consequently, the proportion of individuals receiving adequate energy is also the lowest in Kerala (Table 5). Only 28% of the children have a normal growth status. Yet, surprisingly, this figure is higher than in other states. Further, the incidence of protein-calorie malnutrition is also lower than in many States. Thus, though food intakes are very low in Kerala, the growth and nutritional status of the children is not any worse than in other States, and perhaps even better.

TABLE 4

Deaths by Disease (Per cent of total deaths)

	Diarrhoea Dysentery Cholera	*Respiratory Diseases*	*Fevers*	*Total*
Kerala	2.2	9.1	9.3	20.6
Gujarat	1.6	4.4	24.0	30.0
Tamil Nadu	5.0	8.8	22.2	36.0
Maharashtra	4.4	15.5	16,8	36.7
Karnataka	4.1	9.8	27.5	41.4
A.P.	4.0	7.4	30.9	42.3
U.P.	5.8	11.7	25.1	42.6
Assam	12.1	10.1	26.0	48.2
Punjab	1.3	12.0	50.0	63.3
Bihar	3.4	2.2	57.0	62.6
Haryana	1.5	14.1	57.5	73.0
M.P.	5.4	11.4	56.0	72.8
Orissa	7.1	2.5	64.7	74.3
All India	4.6	9.2	32.9	46.7

Note: The figures should not be taken as absolute because errors in reporting are known. This is only to show the trend.

TABLE 5

Nutritional Status of Children

	Per cent adequate in energy		*Per cent children with normal growth*	*Per cent incidence of PCM*
	*Adults**	*Children*		
Karnataka**	75.3	63.4	9.9	9.2
Andhra Pradesh	69.2	33.3	15.3	5.1
Gujarat	62.8	53.6	10.1	6.1
Maharashtra	61.0	35.5	8.9	6.8
Tamil Nadu	55.6	41.7	14.9	1.4
Orissa	52.7	—	14.5	0.9
Madhya Pradesh	50.8	48.0	11.7	0.5
West Bengal	50.3	34.4	11.0	3.7
Uttar Pradesh	50.3	33.0	18.8	5.0
Kerala	10.8	21.9	28.0	0.7

* These figures should not be considered absolute, since there are some different calculations involved. This is to show the trend.

** Data available for only these States.

How does one explain this paradox? In most States the proportion of adults getting adequate food energy is much higher than the proportion of children getting enough energy (Table 5). This means that food is eaten preferentially by adults, perhaps the wage-earners. In Kerala, the picture is reversed showing a better distribution of food within the family. Perhaps, female literacy is again responsible for this.

It would appear that malnutrition may be greatly responsible for the high childhood mortality in Kerala. Kerala is a poor State with high rates of unemployment and underemployment. Thus poverty may be the major operative factor in the high childhood mortality. It also appears that even in conditions of poverty, education of the women may help in improving the nutritional status and health of the children. Perhaps Kerala is the right place to organise and experiment with supplementary feeding programmes.

In other states, apart from poverty, infections, inadequate rural health services, ignorance, and maldistribution of food within the family appear also to play important role in the high childhood mortality. The experience of Kerala shows that even with limited financial resources, proper health measures and improved rural and female literacy are possible and that these may aid improving child health and child nutrition. Kerala can therefore be considered a yardstick for judging health status in the country.

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"Knowledge of nutrition and health can become an effective tool for the economic fight by the poor. This way the benefits to the poor and their health might be more than through health work alone."

—Abhay Bang

18

Food Requirements as a Basis for Minimum wages

Abhay Bang

Chetana-Vikas is organising rural labourers for their legal right to work and for lawful wages[1]. During this, we faced the question—what should be the minimum wages for a rural labourer? This article is the result of an enquiry into this very important issue. The study may appear specific to Maharashtra, but can very well be generalised.

The prevailing minimum wages for agricultural labourers in Maharashtra are based on the recommendations of a Study Committee appointed by the Govt. of Maharashtra under the chairmanship of Mr. Page[2]

One finds that the Committee has made many errors in its method to decide the wages, and these errors form the 'scientific' secret of the low wages offered to about six million landless labourers and an even larger number of small farmers in rural Maharashtra for the last many years.

What standard of life should be considered as "minimum", when minimum wages are decided? Any definition of 'Minimum standard of life' would be highly controversial. I shall stick to the minimum necessities as understood by the above Committee and to the basic method evolved by the Committee to calculate the cost of minimum living for deciding minimum wages. In this article an attempt will be made to point out some serious errors in certain assumptions about the food requirements used in this method, to correct them and to calculate the corrected minimum wages, using the same formula which the above Committee has established. To make it more relevant for the readers of MFC Bulletin, I shall elaborate only on the nutritional aspect of my enquiry and make only brief reference to the economic part of it.

The Method Established by Page Committee

The report says, 'Minimum wages must be in some way related to the cost of living. The workers must be able to meet minimum requirements of food, shelter, clothings, medicine and education' (page No. 118). We should agree to this fundamental principle.

The method used by the Committee to calculate the cost of such living is as follows:

"The wages should be fixed in quantity of one kind

of staple grain, i.e. jowar in Maharashtra."

"The wages should be calculated in kind first and then converted to cash at a price at par with the selling price of first quality jowar at ration shop".

"For fixing the wages in kind, we have considered the following factors" (page No. 106).

"An average working man requires at least 2000 to 2200 calories for which 625 gms of staple food is a necessity. We are assuming a family of 3½ units i.e. husband, wife and three children. Their requirement will be 2187½ gms This would be the staple food requirement of the average family."

"Normally, we are advised, that staple food requirements are 40 to 50% of the total budget. Working on this basis of 40% which is in favour of the labourer, the total budget would come to 5468 gms of jowar. Making some allowances for one weekly holiday, we can safely assume that a poor worker's family budget would be 6000 to 6400 gms Normally 6 kgs should be earned by 2 persons".

"We were advised that 3 kgs can be assumed as the daily wages in kind for an adult."

The minimum wages and E.G.S. rates decided by the Government of Maharashtra were based on these recommendations. Three kg jowar was converted into cash as Rs. 4 which thus became the minimum wages for the rural labourer.

Errors in the Committee's method and necessary corrections

1. The calorie requirements of the labourers—

The biggest mistake is to accept 2000 to 2200 calories as the calorie requirements of 'average working man'. This is insufficient even for a sedentary man. For a male rural labourer it is 3900 calories/day.

The figure of 2000 to 2200 calories for working man was based on 3 supports (personal discussion with Mr. Page).

(i) Average of National Sample Survey for 10 years.
(ii) The poverty line accepted by Dandekar and Rath[3].
(iii) Advice by nutrition expert.

Let us examine these one by one:

1. The National Sample Survey (N.S.S.) figure is the amount people actually purchase and consume on an average. In India, about half of the population live below the poverty line and don't get enough food. It is ridiculous to consider the average consumption of such semistarved people as their biological requirement.

2. The poverty line defined by Dandekar and Rath[3] is based on 2250 calories, average calorie consumption per capita per day, this being considered "nutritionally adequate". Unfortunately the authors are silent on how this figure has been considered "nutritionally adequate".

Further, the food consumption figures given by N.S.S. and the poverty line accepted by Dandekar and Rath are the average figures of various age, sex and occupational groups. It is well known that the calorie requirements of different age, sex and occupational groups grossly vary. Hence to accept such an average as the calorie requirement of a 'working man', as done by the committee, is not correct.

3. The nutrition expert, mentioned by Mr. Page, is actually a diabetes specialist of Bombay. There is obviously some gross error in the 'expert' advice. (Has he assumed that rural labourers need the same amount of calories as his obese upper class diabetic?)

My conclusion is that the figure of 2200 calories is not applicable to the labourer.

For the purpose of minimum wages and Employment Guarantee Scheme (E.G.S.) we are dealing specifically with manual labourers: hence the calorie requirements of this specific group should be taken into account and not the 'average'.

The Indian Council of Medical Research (ICMR) is the highest body in the field of medical research in India. Based on WHO recommendations and scientific research in India, ICMR gives us the nutritional requirements of various age, sex and occupational groups in India[4]. These figures are accepted and used in the medical field all over India as authentic figures. Page Committee should use these figures,

Calorie needs of rural labourers

The ICMR Nutrition Expert Group has classified adults in various occupations into 3 categories – sedentary, moderate and heavy work, on the basis of their Calorie needs. The calorie requirements are as follows:—

	Male (55 kg)	Female (45 kg)
Sedentary	2400	1900
Moderate	2800	2200
Heavy	3900	3000

In which category, should the agricultural labourers and unskilled E.G.S. labourars be put? This is a very crucial question and needs close examination.

Let me make one observation here about the present state of scientific knowledge. In a predominantly rural country like ours where 70% of the labour force is engaged in agricultural work, scientists and experts are not very certain about the calorie needs of the agricultural labourer. Not that the answer is very difficult, or beyond scientific research. But the plain fact is not much pains have been taken to study this supremely important issue. There are very few studies and many aspects are still unanswered. This is obviously an area which needs urgent attention from the researchers in the field of nutrition.

(1) FAO/WHO Committee puts many farm workers in the 'Moderately active' category. Obviously, the Committee has mechanised farm workers in mind because in 'very active' category are included 'unskilled labourers, some agricultural workers, some farm workers especially peasant agriculture,'[5] so our agricultural labourer and unskilled E.G.S. labourer should come in 'very active' category.

(2) The method used to determine the calorie needs of any occupational group is to break into 3 equal parts, 8 hours each of occupational work, off-duty work like house hold work etc. and sleep.

The variation in calorie needs of different occupstional groups is because of the difference in the calorie expenditure during the 8 hours of occupational work. The calorie expenditure for the other 16 hours is the same for 'moderate' or 'heavy' occupational groups. Hence we will concentrate on the rate of energy expenditure during occupational work.

The 'heavy work' taken for ICMR calculations is one which needs 5 cal. per kg body weight per hour while 'moderate' means 2.5 cal/kg./hour.[6] There is evidence to prove that most of the work done by the agricultural and E.G.S. labourers involve expenditure of calories either more than or equal to 5 cal/kg/hour.

There are two authentic studies[7] [8] referred to by the ICMR Nutrition Expert Group. The calories expenditure in various types of agricultural and other unskilled operations as found in these and some other studies varied from 4.5—10.0 cals/hour/kg body weight.

A question can still be raised that no labourer continuously works for all the 8 hours of occupation. They rest intermittently. Hence actual energy expenditure in 8 hours of work might be less.

The above mentioned two studies have actually recorded the minute-to-minute activity of the labourers during the working hours (for 3 months in one of the studies). Thus the relaxing intervals were also covered. The hours spent in various types of activities were available from this record. The energy expenditure of the labourers during the 8 hours of work was then calculated on the basis of time spent and the rate of energy expenditure in various types of activities. The energy expenditure for 24 hours was 3,020 calories for agricultural labourers and 3,025 for unskilled labourers. The average body weight of the labourers (all male) in these studies was 44 kg to 46 kg If we correct the figures for the reference body weight (55 kg according to ICMR) and for the faecal losses, the calorie requirements of the male agricultural labourer will be 4150 calories and of the unskilled labourer, 3977 calories. It is important to quote from one of the studies "However it would be wrong to conclude that this is the optimal calorie requirement of Indians engaged in heavy activities. Such a conclusion would be permissible only if it is established that the activities investigated represent the maximal efficiency and output. It is possible that the output of work in the subjects investigated in the present study might have been better, had their calorie intake been higher"[8]. In other words, even this figure is likely to be an underestimate because it is calorie expenditure at the present level of intake which, because of severe economic constraints is very low and limits maximum working capacity.

The energy requirements for males in 'heavy work' as advised by ICMR are 3900 calories and those in 'moderate work', 2800 calories. Obviously the agricultural and unskilled E.G.S. labourer's calorie needs are at least those of the heavy worker and not those of the moderate worker.

2. Calorie requirements of children

Another mistake of the Page Committee is to assume that the calorie requirements of the family are equivalent to 3½ units: 2 units for husband and wife, and ½ unit for 3 children.

The per capita 'average' given by N.S.S. or Dandekar and Rath includes all the age groups. If the Committee accepted that figure as the average requirement, it should have at least used the same average figure for all the family members.

Further, the assumption of the Committee that the calorie requirement of child is half of the adult is purely a guess without any scientific support. Because of their growing age, children require quite large number of calories.

3. Per capita calorie requirements of the rural labourer's family

ICMR gives calorie requirements of various age and sex groups[4]. By taking into account the proportion of various age and sex groups in the population, the average per capita calorie requirement at the national level was also calculated. It has been assumed that all adults are moderate workers but we should consider the calorie requirements of the adult working population (age group 19 to 59) as those of heavy workers.

If we do this, we get a per capita recommended intake per day of 2560 cal. This figure is much more scientific and true to the real needs of the workers than the one calculated by Page Committee $\left(\frac{2200 \times 3.5}{5} = 1540 \text{ Cal.}\right)$. This is also closer to the figure of 2400 cal. per capita per day calculated as minimum requirement for the rural areas by the Perspective Planning Division of the Planning Commission of India[9].

4. The family size of the poor

The family size taken for calculations by Page Committee is 5. Assuming that the rural labourers come from the lower 50% of the rural strata, which they surely do, the average family size of this section of rural population is 5.6[10].

Calorie Requirements of a labour-family

The real calorie requirements for a family of 5.6 would be 2560×5.6 or 14336 calories/day. This corrected figure is much higher than the one calculated by the Page Committee (2200×3.5=7700 calories/day).

5. The types of foods in the labourer's diet

The next error in the Committee's calculation is the assumption that all the calorie requirements are met by jowar only. The diet of any labourer should contain:

1. Cereals and pulses.
2. Other types of foods—Fats, Jaggery, Milk, Vegetables etc.

To calculate the staple food requirements of the family, we must deduct the calories provided by the other types of foods from the total.

ICMR recommendations of a balanced diet for a "heavy work" man include milk (250 ml.) fats and oil (65 ml) sugar (55 gm) vegetables (170 gm)[4]. Considering that our economy to-day cannot provide all these things in this ideal proportion, we shall for the time being take into account how much food of this type the poor actually eat to-day. In doing so the poor are probably left with deficient supply of minerals and vitamins. The rural people living at the level of poverty line obtain 200 calories per capita per day from these 'other types of food'[3]. So a family of 5.6 persons would obtain 200×5.6=1120 calories from these foods. The remaining calorie requirements (14336—1120=13216) will be met through cereals and pulses. It is necessary that the diet also provides the amount of pulses recommended by ICMR which for a family of 5.6 works out to 280 gms per day. It must be borne in mind here that ICMR recommendation for pulses is with the assumption that milk is provided in the ideal proportion. As we have not provided for these, the requirement of pulses should be increased to cover the proteins. Hence in our given situation, this figure of pulses is an underestimate. It must be noted that the ICMR has recommended that at least 25% of the total calories should come from non-cereal sources.

This amount of pulses will provide about 980 calories per day to the family. To cover the remaining (13216—980)=12236 calories, the jowar required is 3500 gms (II). Thus the food requirement of the labourer's family are not 2.187 kg jowar as calculated by the Committee, but 3.5 kg jowar and 0.28 kg pulses. In calculating this, we have taken into account ICMR recommendations for calories and pulses only. For other types of foods in the diet, we have, for the present, accepted the existing reality and not the optimum.

6. Other Wastages

These are requirements of a healthy population. Individuals who suffer from worm infestations, diarrhoeas, other infections may have increased food requirements. The majority of the rural poor suffer from one or more of these illnesses, making their real food requirements higher. But we have no method at present to calculate this wastage and so we shall leave it uncovered.

There are various losses between the retailer's shop and human consumption. FAO/WHO Committee (19) and ICMR consider that 10% allowances should be given for such losses[20]. Thus to provide 3.5 kg jowar and 0.28 kg of pulses for actual consumption, the purchaser must be 3.85 kg of jowar and 0.308 kg of pulses.

7. Provision for other necessities

The Committee has assumed that 40-50% of the family expenses are on staple foods, and remaining on the other necessities of life i.e. other types of foods, house, fuel, clothing, medicine, education etc. This is well in agreement with National Sample Survey and with Dandekar and Rath.

Taking into account the fact that a labourer has to earn in 6 days' amount needed for 7 days, the Page Committee calculated the daily requirement to be 6.4 kg of jowar (This the Committee unnecessarily 'rounded off' to 6 kg). Using the same method but using the daily food requirements of 3.85 kg jowar and 0.308 kg pulses the total requirement to cover the minimum cost of living will be 11.27 kg jowar and 0.90 kg pulses per day.

8. Conversion of wages into cash

Without going into the details of the errors involved in using issue price of jowar at ration shops for converting wages in kind into cash it should suffice to say that market price of jowar should be used for conversion because the issue price of jowar in ration shops does

not reflect the general price rise. The prevailing market rates are:

Jowar—11.27 Kg. × 1.75 Rs. = Rs. 19.70
Pulses— 0.9 Kg. × 5 Rs. = Rs. 4.50

9. Total cost of living of the family and wages

Thus the total cost of minimum living for the labourer's family is Rs. 19.70 + Rs. 4.50 = Rs. 24.20 per day. By the Committee's own guiding principles, a labourer's family should get this much amount as wages to cover the minimum necessities of life.

This amount is to be earned by a couple. Assuming equal wages are given to male and female, it should be Rs. 12.10 per day.

10. Earning Members

In the organised sector the salary of white collar workers (Eg. Lecturers, bank employees, Govt. Officials etc.) are so decided that one member should earn all the family requirements. But for the rural labourer, the Committee assumes two persons earning the family requirements thus reducing the wages to half—to be earned equally by male and female.

We must also remember that at present there is no provision for the days lost due to sickness, pregnancy and delivery.

Cost of living is the cost of production of the labourer

Thus Rs. 24.20 is the cost of minimum living for a labourer's family. In other words it is the cost of production of labour power i.e. the cost that a labourer-couple has to incur to produce one day's labour-power.

It is a widely supported principle now that the farmer should get the cost of production for his produce. Similarly the labourer also should get the cost of production of his labour-power.

Wage rates and justice

This rate (Rs. 12.10) may appear too high to some people, only because we are accustomed to a very low and unjust figure of Rs. 4.

These new wages are calculated to provide the necessary calories and proteins (only partly) from the cheapest sources (jowar and pulse) and to provide other necessities of life at the present level of actual consumption by the poor (and not the ideal level). Hence they are the minimum.

Four things must be borne in mind while thinking about these rates.

(i) Rs. 24.20 per day × 26 days of work per month = Rs. 627 per month will be the income of a family of 5.6 persons i.e. Rs 112 per capita per month. This is still within the limit of our average per capita national income (Rs. 142 50 per capita per month)[12]. Our economy can provide such wages provided the exhuberent incomes of few other people are slashed down. This is, after all, a question of political will.

(ii) The wages for the rural labourers in Kerala, Punjab, Haryana are already more than Rs. 10 per day.

(iii) Minimum wage in E.G.S. are not merciful relief or dole offered by the Government to the labourers. This is a legal right of the labourers and a pledge and responsibility of the Government of Maharashtra.

(iv) Many persons argue, "but labourers don't eat

the amount that has been recommended by ICMR, and still they are not hungry". Here one must remember what ICMR experts said—

"Unfortunately, experience has shown that human beings can adapt themselves, at a low level of vitality and with their powers impaired, to an insufficient ration without realising that that they are underfed".[11]

Conclusion

(1) In spite of having accepted many limitations posed by the Page Committee's frame work (Eg. requirements of other types of foods, number of earning members in a family, wastages of calories and time due to illness etc.) the minimum wages for rural labourer work out to Rs. 12.10 per day instead of Rs. 4 per day.

(2) The level of scientific accuracy is extremely low in the calculations of a high power committee like the Page Committee, whose report decided the daily wages for more than 10 million people. One tends to wonder whether these mistakes were innocent or motivated. We learn from this exercise that no report from such 'authentic' committee be accepted blindly.

(3) There is an urgent need to do more research on the calorie expenditure and nutritional requirements of the agricultural labourer. The insufficient material presently available also speaks about the research priorities in our country.

(4) Knowledge of nutrition and health can become an effective tool for the economic fight by the poor. This way the benefits to the poor and their health might be more than through health work alone.

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"Health and nutrition insurance cover for women and children of the families must form an integral part of the programme. With both parents at work children below 5 are bound to suffer. Therefore, the landlord must be required to deposit Rs. 5/- every month for each labourer (male or female) employed by him, in the local bank for this purpose."

—**C. Gopalan**

19

Nutritional Basis of Minimum Wages

C. Gopalan

(The December 1981 issue of the Bulletin carried an article by Abhay Bang on nutritional requirements as basis of deciding minimum wages of agricultural labourers. Dr. C. Gopalan, the renowned nutritionist, has at our request sent his comments on this article—Editor).

1. The *energy requirement* of 3,900 Kcals for heavy work, is for the reference man with a body weight of 55 kg. Studies from the National Institute of Nutrition (1,2) have shown that the body weight of poor labourers engaged in heavy manual work is 44 to 46 kg. and their daily mean energy expenditure is 3,025 Kcals. Thus, even with the current low body weights, *the*

energy requirement of a male agricultural labourer will be 3,100 Kcals. We may assume that he is laid off work for 3 months in a year, when his energy requirement will be 2,200 Kcals (sedentary work, corrected for body weight). Thus, he needs 3,100 Kcals daily for 9 months and 2,200 daily for 3 months, or on an average 2,900 Kcals daily throughout the year.

2. Similar calculations for the adult *female* (corrected to 40 kg. body weight) will yield a figure of 2,200 Calories per day.

3. The minimum wage can only provide for a *family size* consistent with our national policy of a small family norm, namely only two children. We may assume both the children to be below 12 years. The energy requirement figures will, therefore, be 1200 for the child below 5 years and between 1500 to 2100 (mean—1800) for a child between 5 to 12 years of age. The total energy requirement for the children will work out to 3,000 Kcals (1200+1800).

4. The total energy requirement per day for the family will be 8,100 Kcals.

5. I would suggest that the cost of this diet be based not merely on the price of the staple cereal but on a least cost *balanced diet*. In 1979, for an urban area, the average cost for such a diet providing 2,400 Kcals was Rs. 2-90 without including fuel expenses (3). On this basis the total family diet of 8,100 Kcals will cost Rs. 10-11.

6. We may accept two-thirds of total income as a reasonable and *realistic level* for food expenditure. Thus the daily minimum wage for the family will be Rs. 16-00.

7. We must make an allowance for *lack of wages for*

90 days since agricultural and rural labour are usually laid off for such a period. We also have to provide for short periods of sickness. Therefore, the daily wage will be 16×4/3, or about Rs. 22-00 per day for family. It may be pointed out that many of the assumptions in the above calculations are based on an appreciation of the hard current realities and not on "idealistic" considerations.

8. From the above calculations, we may accept the *minimum daily wage of Rs. 22-00 for family*. If we assume that both the man and his wife will work, the minimum daily wage will be Rs. 11-00 per person. However, certain realities must be accepted. The output of work of women in an occupation involving manual labour will be less. Therefore, the landlords may feel reluctant to engage women for the same wages. It may, therefore, be prudent to suggest a minimum daily wage of Rs. 12/- for the man and of Rs. 10/- for the woman on the basis that different types of agricultural operation are involved. It must be clearly emphasised that this is valid only if both the man and the woman in the family are provided employment for at least 270 days in the year and preferably for 300 days.

The minimum wage proposed should automatically fluctuate with the cost of living index, using 1981 as the base year.

9. The prescription of a minimum wage must also go hand in hand with fixing a minimum norm for *productivity* and discipline. This is what has really made Japan prosperous. Those who vociferously demand higher minimum wages rarely talk of productivity. The norms for productivity must however take into account the *small*

body size of the labourer, the result of chronic undernutrition.

10. There should be acceptance and enforcement of a *small family norm*. Two children and no more. I have therefore taken only 2 children (or family of 4) for consideration in computing daily wages, you may ask why talk of the 2 child family norm only for labourers and not the rich. In my opinion, this should be the norm for all, irrespective of religion, caste and socio-economic status.

11. *Health and nutrition insurance cover* for women and children of the families must form an integral part of the programme. With both parents at work children below 5 are bound to suffer. Therefore, the landlord must be required to deposit Rs. 5/- every month for each labourer (male or female) employed by him, in the local bank for this purpose. One Health worker per 100 families could be employed, to provide special health and nutrition cover to the family, reinforcing the existing health structure. A creche for underfives can also be set up.

12. On its part, the State must of course provide safe drinking water, reasonable environmental sanitation and basic health care.

13. There is also another aspect to this. If the *cost* of agricultural labour operations are increased to very high levels, this is bound to be reflected in *increased prices of food grains*. This may disrupt the economy to the eventual disadvantage of the labourer himself. One way of overcoming this is to propose that half the wages may be paid in the form of food grains, at prevailing prices.

It has been the sad experience that there is often a wide disparity between what the rural labourer is supposed to get and what he actually gets. The prescription of a "minimum" wage will have only academic value if there is no machinery for strict enforcement. This is really the crux of the matter.

(The original note does not contain the emphases-Editor).

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Rural women do on an average eight hours of domestic labour (collection of fire wood, fetching water, cooking, carrying husband's food, livestock grazing) expending 1010 Calories per day on this work alone. Obviously, even on unemployed days, the labourers need more calories than a sedentary person.

—**Abhay Bang**

20

Food Requirements and Minimum Wages: A Rejoinder

Abhay Bang

I read with great interest Dr. C. Gopalan's comments on my article '*Food requirements as a basis for minimum wages.*' I am very encouraged to note that—

(1) The issue has interested an eminent nutritionist like Dr. Gopalan.

(2) The final figure of minimum wage arrived at by Dr. Gopalan's calculations is almost same as that of mine.

(3) The balanced way in which he has reacted is quite a lesson for us in MFC who often react in a very aggressive and emotional fashion which creates more heat than light.

Even though the final figure is the same, I dare to differ on some points with Dr. Gopalan.

(1) Energy Requirements

Dr. Gopalan assumes that the average body weight of male labourers is 44 to 46 kg. as assumed by ICMR as reference body wight for Indian man. He has taken this figure from 2 studies. The sample size in these studies is 6 adult males in one and 30 in another. These studies were primarily designed to measure the calorie expenditure of male labourers by doing metabolic studies. For such tedious studies obviously the sample cannot be too large. Hence these studies are useful for knowing the calorie expenditure of labourers of the given body weight, Dr. Gopalan is not justified in using the average weight of the small sample from this study as the average weight of crores of Indian males.

I do not know why ICMR has taken 55 kg. as reference weight for Indian males. I am also not aware of any study which gives average body weight of Indian labourer, taking a wide sample on the National level. Hence I am not in a position to comment what is the average weight of Indian labourers but obviously the above two studies cannot be used for this purpose.

The second question which crops up is, are we going to provide food for the existing low body weight and thus seal the fate of the Indian labourer at the present low body weight? As the studies at NIN have shown, Indians, by heredity or constitution, are not destined for a low body weight as was prviously thought and if provided with adequate food and other care, an Indian child matches the Western standard of growth and

development. Hence it is chronic undernutrition which has resulted in our present underweight 'pigmy' population. Unless this class is provided with more food, underweight will persist. So one should provide the food required for a person of optimum body weight (55 or 65 kg) to break the present bottle-neck and allow the labourer's children to grow to their fullest physical potential. When treating a child with marasmus, do we ever say that he should be given calories according to his present body weight? On the contrary he is given nutrition according to the expected body weight for his age so that he can grow to that optimum level.

While calculating the calorie requirements for the unemployed period of the labourers, Gopalan has assumed that their calorie requirements are those of sedentary persons. The off duty work and house hold work that labourers, specially females, have to do is much more strenuous than a sedentary person has to do. The ASTRA study of rural energy patterns has shown that rural women do on an average 8 hours of domestic labour (collection of fire wood, fetching water, cooking, carrying husband's food, livestock grazing) expending 1010 Calories per day on this work alone. Obviously, even on unemployed days, the labourers need more calories than a sedentary person. Batliwala has recently (EPW, Feb. 27) proposed an interesting approach to bridge the energy deficiency by cutting down domestic labour by providing amenities like electricity, water supply, easy fuel to the rural people so that this huge energy expenditure on domestic work is saved.

Dr. Gopalan has also not made any allowance for pregnancy and lactation. As Kamala Jayarao has shown in her article, "Who is malnourished; Mother or the woman?" an average woman spends about half of her reproductive life (15 to 45 years) either in pregnancy or lactation.

Thus it appears that Dr. Gopalan has underestimated the calorie needs of the labourers. This underestimation is further aggravated severely by the small family size of 4 assumed by him.

(2) Family Size

Dr. Gopalan supports his calculation of food allowances for a small family by saying that it is consistent with National policy. Who decided this National policy? How is this figure of two children decided? Has any thought been given to why the poor need and produce more children? When 25 to 30% children die before the age of 5 years-and this average figure will be still higher for the poor class - how can we enforce that the poor should stop at 2 only? It is now fairly accepted that poverty is the main reason, for the higher birth rate. Hence slogans like 'Development is the best pill'.

If food allowances are made only for 2 children because such is the National policy now, what will the poor do with their already existing extra children? starve and kill them? Incidentally many of these 'surplus', children were born when the National policy was of 3 children or when there was no National policy.

By making allowances for a smaller family of 4- (when the reality is that the poor have a family size of 5.6),) the allowance 4 will be distributed over 5.6 persons, obviously frustrating Gopalan's efforts to provide

minimum standard of life to the poor and perpetuation of poverty will frustate all the efforts to achieve the 'National goal' of family size of four. It is a self defeating proposition.

While one should agree with Gopalan that small family norms should be achieved, the methods have to be dfferent. Even though I am not proposing an indefinitely large family, let me just point out that for the purpose of land ceiling or urban wealth taxes, there is no limit on the family size. The rich have the facility to have more children to save their wealth. In the organised sector, the wages are calculated for a family of five. In such context, restricting the minimum wages of the poor so that they can maintain only a family of four does not seem justified.

While Dr. Gopalan states at one place that "many of the assumptions in the above calculations are based on the appreciation of the hard current realities and not on "idealistic" consideration," one fails to understand why he doesn't accept the hard fact about the existing family size.

(3) Balanced diet

Dr. Gopalan has aimed at providing a balanced diet to the labourers. It is most welcome. As I was operating within the framework of the Page committee, I couldn't venture to ask for balanced nutrition and argued only for cereals and pulses. But let me point out that the cost of the balanced diet taken into account by Gopalan is one prevailing in 1979. By'82, the costs have scaled up at least by 40%. For calculations of minimum wages today, prices of 1982 have to be used.

(4) Less wages for women

The difference in wages for males and females proposed by Gopalan is not justified on the basis of difference in work output because men and women do different types of work. Men do physically strenuous work while women do more skillful and tedious types of operations. The output of two different categories cannot be compared. But women usually put less hours of labour (they go late to fields due to their domestic duties) and on this ground unequal division may be considered.

Dr. Gopalan has touched the heart of the whole problem when he stated "The prescription of minimum wages will have only academic value if there is no machinary for strict enforcement." In our area we are facing difficulties in trying to enforce even the existing minimum wage act of 4.5 Rs. per day. How can the minimum wage of 12 Rs. be actualised? But then this is the next inescapable logical step of all this exercise. May be other people can take over this responsibility than us, the medicos.

Editor's remarks

(1) The average body weights of rural adults are 46-50 kg (males) and 40-44 kg, (females): National Nutr. Monitoring Bureau, 1980. The figure 55 kg. was fixed by ICMR arbitrarily when data on Indian adults were not available. Now ICMR has attempted to make suitable alterations.

(2) The comparison of energy provision for adults and for a marasmic child is not correct. Since children possess growth potential, their requirements are calculated on "ideal weight." For adults, since maximum growth has stopped, calculations are made for "actual weight".

"The question is not whether supplementary feeding programmes improve nutritional status of the children. The point is, unless they are a part and parcel of an overall economic programme they should not be taken up "

—Kamla S. Jaya Rao

21

How Successful are Supplementary Feeding Programmes?

Kamala S. Jaya Rao

It is very well known that undernutrition among children is a major public health problem in India as well as in other developing countries. With a view to mitigate this problem, many governments sponsor large scale supplementary feeding programmes. Imrana Qadeer had discussed in one of our earliest issues the relevancy or irrelevancy of these programmes (1) The programmes have been going on and supplementary feeding is presently a major component of the Integrated Child Development Services (ICDS) of the government of India. A question often raised is, how successful are these programmes?

The impression gained from listening to seminars or through personal discussions with various people is that the programmes do not really improve the nutritional status of beneficiaries in any substantial way. However, when one goes through the relevant literature, the position is not as clear. As Gopalan said, "With no built-in machinery for scientific direction or evaluation, the position with regard to many feeding programmes is truly chaotic" (2).

Recently the UNICEF had commissioned Beaton and Ghassemi to write a report on this subject. The report says, "while food distribution programmes of many types have been introduced in many countries relatively few have been examined or evaluated in a manner that produces usable information for the present assessment of past experience" (3).

Types of Feeding Programmes :

Before evaluating the programmes, let us consider the two main types of feeding programmes. The first is the on-the-spot feeding or supervised programme. The children are assembled at a Balwadi or some such central location and are fed once a day. This entails that,

1. the young preschool child has to be brought to the centre by an older sibling or parent;
2. the centre must be reasonably close to the house, to ensure regular attendance;
3. the centre needs personnel to cook and serve the food;
4. the child has to eat the entire amount of food at one sitting;

5. since no organisation can run throughout the year without breaks or holidays, the feeding in effect generally takes place only for 250-300 days in a year.

The second type of feeding programme is the Take-Home distribution programme. Food, adequate for a week or more, is distributed at the centre and it can be carried home.

1. This needs less frequent visits to the centre and proximity of the centre to the house becomes less important.
2. The presence of the beneficiary child at the centre is not essential.
3. The food can be given to the child whenever it is hungry, and in divided amounts, if so desired.
4. The child will receive the food for all the days in the year.
5. The centre does not have to keep utensils for cooking and serving the food.

In the take-home system, there is the risk of sharing of food by other members of the family. However in most studies where this was noted, it was observed that the sharing occured with siblings under 10 years of age and not with adult members. This partly depends on the nature of food distributed. Any food identified by the community as children's food was generally not consumed by the adults.

To overcome the problem of sharing, in one study conducted in Colombia, South America, enough food was given to take care of the energy gap among all members of the family (4). The targets were however pregnant and nursing mothers, and young children. The food ingredients are those commonly used by the local population, such as bread, oil etc. It was however found that the total calorie intake of beneficiaries had not increased. It was concluded that either part of the food was being sold in neighbouring, control villages or the money spent otherwise on food by the family was now being used for buying other necessities.

The Problem of Substitution

Thus in the above study, the intended supplement was being used as a substitute. This problem of substitution is seen in both supervised feeding and in take-home programmes. In the former, the time of feeding is fixed according to the convenience of the organisers. It was felt that if the gap between this and the normal meal time at home was not much, the child may not eat its usual quota. However, the process of substitution even in the take-home programme believed this assumption. "The overall impact of these programmes, of either type, in filling the apparent 'energy gap' of young children is disappointing". "For most programmes the supplement was designed to meet about 40-70% of established energy gap. In point of fact, only 10-25% of the gap was closed."

"On the basis of these data alone, one would have to question the effectiveness of food distribution programmes in effecting satisfactory net increases in energy intake among target population" (3).

However, the results of some individual studies have been more encouraging. Thus, according to the Project Poshak, the food was used as a complete supplement

in children between 1-2 years and mostly as a supplement, and only to a small extent as a substitute in those between 2-4 years. The supplement was hardly ever given to infants below 1 year (5).

A strong component of health and nutrition education is necessary for the parents, particularly where the take-home system operates. This may ensure, to some extent, that the supplement is not utilised as a substitute. The extent of substitution will also depend on the economic pressures and financial liabilities of the family. In the take-home system, if all the children of the family are not included, sharing will become inevitable, unless the supplemental food is the same as the staple consumed in the family. In on-the-spot programmes too, sharing cannot be avoided in the poorer families. The food from the family pot which would have normally been the share of the beneficiary child, may now be offered to the older siblings. In many instances, the person accompanying the child to the feeding centre happens to be an older sibling and she has to be included in the programme both for psychological and ethical reasons. A strict bureaucratic attitude of including only preschoolers, whatever their vulnerability from the nutritionist's point of view, will not help in the long run.

Improvement in Nutritional Status

The above conclusions were drawn mostly from diet survey data. Results of nutrition surveys, on the other hand, are more encouraging. It is well recognized that individual diet surveys, particularly of young children is a difficult task. The errors can therefore be great. In this respect, nutrition survey data are more accurate.

Evaluation of a Special Nutrition Programme organised for tribal children showed that in villages where the programme was on, there was no grade III malnutrition. Incidence of grades II and I was less compared to that in unsupplemented, control villages. It is not known how long after the implementation of the scheme, these changes could be seen. The evaluators attributed the success of the programme, which was on-the-spot type, to the fact that the villages were compact, locals were employed as helpers and food material was directly supplied to the organisers (6). Other studies also showed that when planned and operated properly, supplementary feeding can result in improvement of the growth status of the malnourished child. By and large, it appears that success depends, as in any such programme, on the dedicated involvement of the organisers and in the continuous operation of the programme. Such of those voluntary agencies or research projects have been successful because a single agency operates the programme continuously in the same villages.

An important observation made in one of the studies was that although all malnourished children benefitted, those severely malnourished benefitted most, the increments in heights and weights being more in these children (7). In any large scale feeding programme, almost all children of the community are included, irrespective of their nutritional status. If a striking improvement is seen only in the severely malnourished, then these will be missed in the calculations of means, averages etc. of the whole group. It is therefore necessary that children with different grades of malnutrition are classified separately before the start of the programme and the effects on both food intake and body growth are calculated separately for each group. Such an analysis may provide a more accurate picture. If supplementary feeding programmes are then found to help reduce grade III malnutrition and prevent others from sliding into grade III, the programmes cannot be deemed unsuccessful.

I will not go into the cost-benefit effectiveness of the programmes. Firstly, there are not many, or perhaps any, such evaluations. Secondly, I am not competent to make such assessments. The question that however, needs to be asked is, even if these programmes do mitigate malnutrition to a some extent, how long should they be continued?

The ICDS Programme

Every nutrition programme, when taken up is referred to as short-term measure, the implication being that such measures are needed till socio-economic conditions improve. However, neither administrators and planners nor politicians define this word, 'short-term. One wants to know how long will the short term be? In view of the programmes being termed short-term, they are started as ad-hoc programmes; the definition of short-term is restricted to this and unfortunately no attempt is made to link it with a long term goal, or, may be the truth of the matter is that our developmental plans have no specific goals. The mammoth ICDS programme is a case in point (8-10). Nowhere is it mentioned as to how long the supplementary feeding will be a part of the comprehensive programme.

The whole ICDS project is actually termed an experiment and yet an experiment whose duration is not mentioned. A strange way indeed of starting an experiment. Although the ICDS was conceived by the Fifth Planning Commission, it does not seem to have been linked with any economic programme. The latest evaluation report of the ICDS attributes the improvement in the nutritional status of the children solely to the programme since there were absolutely no changes in the socio-economic conditions in those study areas. This may be very well as far as the success of the ICDS is concerned. The ICDS covers large parts of the country and more areas are coming under its purview. In view of this, that statement needs serious consideration. How long will a country be able to feed children, who may number 100 million or more, without any socio-economic improvements? Was the ICDS programme started in areas where the Planning Commission also launched some new economic programme? If not, the whole programme will be a collossal burden and the country will become more and more dependent on foreign aid, whether that comes directy from donor countries or through international agencies. Assuming that we save young lives through ICDS, what is the next help the child will get in terms of food in late childhood, education, vocational training etc? One finds no answers.

As Dr. Gopalan said, "In the long run, we can hope to improve the nutritional status of our preschool children only through improvement in the economic conditions of the community to a level at which families can afford balanced diets. Organised state-sponsored

feeding programmes cannot be the permanent answer to the problem"

"The need for supplementary feeding programmes for preschool children will be inverse proportion to our success in the matter of removal of socio-economic disparities and improvement of economic and living standards of our people" (2).

The question is not whether supplementary feeding programmes improve nutritional status of the children. The point is, unless they are a part and parcel of an overall economic programme they should not be taken up. The success of the programme should be measured in the context of the success of the overall-economic programme. If not they should be restricted to only two situations. Firstly, in emergencies like acute natural and man-made calamities. Secondly, in extremely poor and backward areas where the administrators and planners are able to state categorically that significant improvement in socio-economic conditions will not be possible in a specified period of time, for whatever stated reasons.

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From the Editor's Desk

Malnutrition and Intelligence

Among all the known aspects of malnutrition, none has made as deep an impression on doctors, scientists and the lay public alike as brain damage. This has had very serious implications. Firstly it is believed that all malnourished children, irrespective of the degree of malnutrition, become mentally retarded and turn out to be idiots. Secondly, since it is the poor that suffer from malnourishment, the poor are idiots. Therefore, reservations in educational institutes and jobs are futile, because they are malnourished and mentally retarded. When such dangerous convictions are held by the privileged classes, it is important that this issue is examined in its proper perspective.

It is true that when psychological tests were performed, children who had suffered from kwashiorkor scored poorly compared to apparently normal children from the same community. However, it must

be emphasised that these are children who suffered from the most severe form of malnutrition, namely, kwashiorkor. At any time point only 1-2 per cent of the under-five suffer from such severe malnutrition. The rest suffer from mild to moderate forms of malnutrition. There are no studies to show that mental retardation occurs in these conditions. Considering that other physiological functions were found not to be affected in such children, one may, until proved otherwise, assume that brain damage also does not occur in mild and moderate malnutrition. Therefore one is not justified to say that mental retardation is a consequence of malnutrition, without stating the degree of malnutrition.

Even in the severe forms where mental deficiency has been demonstrated, it is not conclusively proved that the deficiency is the result of malnutrition alone. At least two studies, one from India (1) and the other from Mexico (2), indicate that the lack of adequate and timely environmental stimulation is as important a causal factor, if not more, in leading to poor mental performance. It was found that the mothers were poorly motivated and showed no interest in the development of the children. For a child's intellect to develop a close interaction with surrounding individuals is necessary and normally the mother has a predominant role to play in this. These children lacking this maternal interaction and interest perhaps suffer both from severe malnutrition and lack of intellectual development.

The mother's apparent lack of interest can be appreciated when one realizes that parents in highly impoverished families have varied and tremendous burdens to bear. The woman has to work outside the house, despite which the family income does not help ends meet. There are never ending debts to be paid off. Perhaps another pregnancy (with no wherewithal to terminate even if unwanted), perhaps a drunkard husband, an ill-treating mother-in-law, the constant illness of the children, and her own failing health. There should therefore be little wonder that the mother shows no interest in her children, family or her own life, although this may be difficult to grasp for the economically privileged classes.

Environmental stimulation is very important in intellectual development and families suffering from severe poverty and therefore malnutrition, also do not provide enough intellectual stimulation for the children. An interesting study on tribal children of Maharashtra (3) has not received the publicity due to it. It showed that 45 per cent of children with normal nutrition fared badly on intelligence tests and 30 per cent classified as malnourished performed normally, showing that malnutrition is not the only factor determining intellectual performance.

Even in those children who suffer mental damage due to malnutrition, is the damage permanent? Some follow-up studies indicated that even in later childhood these children performed poorly on intelligence tests (4). However this was not a permanent deficiency but a delayed development; that is, a 16 year old performs only as well as a 12 year old but does not stay put at the 6 year level or the 12 year level. Age anyway is a relative factor. This would only mean that a child may finish school at 20 years instead of 16. Does this really matter to children to whom schooling is anyway denied?

How important is it for a community that is engaged in traditional occupations? And perhaps, experience has taught the community how to teach these children the traditional skills. Who has ever really examined this?

Moreover, it must be remembered that children followed into adolescence, have continued to live and grow in an environment that has hardly changed from childhood. The same socio-economic pressures, the same lack of parental interest and no proper school environment. Therefore one cannot say that the poor performance on intelligent tests during adolescence is the residual effect of childhood malnutrition. On the other hand, when malnourished Korean orphans were adopted by foster parents in America, they showed no residual mental deficiency in later years (5).

The last, but not the least important, aspect is the appropriateness of the intelligence tests used. It is true that attempts were made to 'adapt' the tests to local conditions. But, how 'appropriate' are the investigators themselves? We, with an urban education and an urban style of living and thinking, to what extent have we truly 'adapted' ourselves to the 'local conditions?' Even if the mother tongue of the investigator and the investigated is the same, the dialects are so different. There are so many cultural variations...the way a question is put, the way answer is received all make a difference in assessing mental performance. If the tests were so designed to include chores and life styles to which the child is daily exposed, would the performance be distinctly better?

In summary, there is no strong evidence to say that there is permanent brain damage due to malnutrition.

Although children with severe malnutrition perform poorly on intelligence tests the environment may play an important role in this. There is no evidence that the delayed 'mental development' cannot be rectified by proper training even in young adulthood. Lastly, we do not know whether the urban-based investigators are truly competent to offer the intelligence and psychological tests. If the roles were reversed, how well will the present investigators perform on those intelligence tests?

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It is a matter of regret that there is not a single study on the health problems of the workers of an industry involving material whose hazards are well documented.... The Medical Inspector of Factories has passed over the responsibility of producing a "prima facie evidence" on to us.

—**Dhruv Mankad**

22

Health Problems of Tobacco Processing Workers

Some Impressions

Dhruv Mankad

The tobacco processing industry of Nipani (Karnataka) employs around 6,000 workers, most of them women. Given the apalling conditions under which they work and live—the latter not being very much different from that of other workers of the unorganised sector—it would be unscientific not to suspect the presence of a variety of work-related diseases amongst them.

When I started working for a dispensary run by an institution in close association with their Union, Chikodi Taluka Kamagar Mahasangh, I began to look for correlations between the symptoms presented by the workers and the nature of their work. After working for around two years what I observed is a distinct pattern in the diseases and health problems that afflict these workers. Although I have not done any systematic study as yet, I have been able to form some impressions which I wish to share.

The process of converting raw tobacco into processed zarda or beedi zarda consists of a number of part-manual, part-mechanical operations of winnowing, sieving and pounding. At times all these are done with the help of machines. Finally, various grades and kinds of tobacco are blended into a mixture as required for a particular brand of beedi. The whole process, particularly winnowing and blending, causes a lot of fine tobacco dust to fly up into the air of the closed rooms that pass-off as factories. For a newcomer it is impossible to stand there even for half a minute without retching or getting a bout of coughing and sneezing. New recruits often feel giddy and vomit while working. The whole process also entails direct contact of the skin with tobacco. During the blending which is done with legs, the heat generated by constant sprinkling of the tobacco zarda with water is a problem added to the risk of constant skin contact.

Initially, my colleagues and I had formed tentative ideas about the work-related diseases (I hesitate to call them occupational diseases for want of any evidence of correlation between the work and the disease) we were likely to come across. We expected that the workers would be suffering from the following:

1. Respiratory diseases: Chronic bronchitis, emphysema, bronchial asthma etc. due to constant inhalation of tobacco dust.
   —Malignancies of the respiratory tract.
   —Laryngitis, Laryngeal tubercle etc.
   —Increased proneness to tuberculosis.
2. Skin diseases like contact dermatitis and allergic disorders,

Although based on my subjective experience, I can say with some confidence, and relief too, that some of the conjectures were probably wrong:

(a) Respiratory disorders like chronic bronchitis, emphysema etc. are not as widespread as we had expected, though probably more common than encountered elsewhere.

(b) We have not come across any patient with malignancies of the respiratory tract, which is somewhat perplexing as constant contact with tobacco in other forms have been associated with malignancy. We had three patients with oral cancer but they had a history of tobacco chewing.

(c) Bronchial asthma too, does not seem to be any more common than elsewhere. But in at least two out of eight patients taking regular treatment from our dispensary, the onset could be correlated directly with the work.

(d) Tuberculosis too, does not seem to be any more widely prevalent than in other areas. In fact, 11 of the 13 T.B. patients under our treatment so far, have been beedi rolling workers or their family members. Only one woman patient was working in a tobacco factory and the other was her daughter.

This is a very perplexing epidemiological fact requiring further investigation. Many occupations involving inhalation of various kinds of dusts make the workers vulnerable to T.B. e.g., slate pencil industry, stone breaking etc. It is also a well known fact that beedi workers are more prone to T.B. No causative factors have been identified as yet, though.

(i) Laryngitis is quite common especially after the mixing operation which as mentioned above causes a lot of tobacco dust to rise. In many women and men, voices have changed and some even lost them altogether.

(ii) Skin problems like dermatitis, urticarial rashes etc. are quite common. Many women complain of fissures in the soles.

Many problems not considered earlier have been encountered:

(a) The incidence of dyspeptic symptoms, hyperacidity and we suspect even peptic ulcer may be quite high. Almost all the tobacco workers who have attended the dispensary have one time or the other suffered from these symptoms. One factor which we have not considered is the habit of tobacco chewing which is quite prevalent.

(b) The commonest complaint that the workers have is low backache and pain between the shoulder blades. This problem seems almost universal among the tobacco workers. To this, one can add the problem of painful and stiff knee joints. Many operations like pounding and sieving require the

worker to squat on her legs for hours together. This awkward posture must take its toll. That most of these problems are caused by muscular strain is borne out by the fact that relief is obtained by massaging the affected part with or without a counterirritant. Liniment turpentine is perhaps the most freqnently used drug in the dispensary. Of course, low nutritional status, housework and frequent child birth cannot be ruled out as other possible causative factors without a thorough study.

This problem seems to be more acute in beedi-rolling workers. They complain of pain and stiffness of neck, too. They sit in even more awkward position—with straight back and legs stretched out in front of them and stooping over the tray containing tobacco and beedi leaves kept over the legs.

(c) Chronic dacryocystitis seems to be more common than encountered elsewhere. It may be because of chronic inflammation as a result of tobacco induced irritation, blocking the nasolachrymal duct, or as a result of physical blockage of the duct by tobacco dust.

The experience so far raises certain questions which we are trying to solve by a systematic study of some of these problems:

1. What are the relative incidences of the diseases noted above in the workers and control subjects—sexwise and age group wise. If the results confirm the subjective experience so far then,

2. Why is the incidence of both pulmonary tuberculosis and malignancy of the respiration tract so low? Has it anything to do with the fact that most of the workers are women?
3. Are the muscular problems related to posture during the work or are they due to other causative factors noted above?

It is a matter of regret that there is not a single study on the health problems of the workers of an industry involving material whose hazards are well documented. The National Institute of Occupational Health could help me with only a single reference to a study on hazards to agricultural workers involved in tobacco farming. Dr. Gupta of the Department of Occupational Health, Central Labour Institute, Bombay did promise to initiate a study on an official request from the Medical Inspector of Factories. In turn the Medical Inspector of Factories has passed over the responsibility of producing a "prima facie evidence" on to us.

Is this callousness on the part of the authorities due to the fact that these workers belonged till recently to the so-called unorganised sector or is it because most of them are women? I do not think any systematic study is required to answer this particular question.

From the Editor's Desk

Dhruv Mankad needs to be congratulated for the systematic work he has undertaken. The article is based on

his personal experience. Although he is careful to say this is not a systematic study, his results compare very well with those reported by the National Institute of occupational Health, Ahmedabad (NIOH).

The symptoms described such as nausea, vomiting, dizziness, headache etc. belong to a syndrome known as green tobacco sickness. This was first reported by Gehlback from the U.S. (JAMA 229, 1880, 1974). This was described in those who work on tobacco fields in North Carolina state and hence the name green tobacco sickness. The authors stated that though the symptoms were known to the workers for many years, they were never described till then in medical literature. This was considered to be of a recurrent, self limiting nature. Symptoms occured a few hours after starting work and was described as a combined dermal-respiratory exposure. Gehlback also found that smoking protected against the symptoms, perhaps due to an increased tolerance to nicotine.

In our country, tobacco is mainly cultivated in Andhra Pradesh and Gujarat. There were said to be 1.2 lakh workers in the organised tobacco industry as of 1974. Studies by NIOH on those harvesting tobacco as well as handling cured leaves confirmed the findings of Gehlback. They also described difficulty in breathing, breathlessness, dry cough etc. In 1980 NIOH did a study on tobacco processing workers in Nadiad, Gujarat. The work included pulverising dry leaves, sizing and filling-up in the bags. Symptoms were found in 70 per cent of the workers but most commonly only after heavy dust exposure or during hot summer months. Symptoms persisted only for a few hours and were considered by the investigators to be mild in nature.

The NIOH study also found a slight increase in the incidence of tuberculosis and also hypertension. Dhruv Mankad has raised the question as to why the incidence of tuberculosis and cancer were not high in those studied by him. As far as tuberculosis is concerned, unless the incidence in the general population is known, it is difficult to state why there is no increased incidence in the beedi workers. After all, tuberculosis is an infectious disease and other factors described by Dhruv can only be precipitating factors. As far as cancer is concerned, it is not so easy to find a correlation between occupation and the disease. A large number of workers have to be studied, their ages known and also the length of exposure to tobacco should also be known. Therefore, by a small study like this one cannot categorically say whether the incidence of the two diseases is high or not in these workers.

I am glad that Dhruv has given us these findings on an industry regarding the health problems of which, as he rightly says, we do not have much information. I also hope this will enthuse other members to share their own experiences, although the studies may not always compare with those taken up by established research workers and centres.

The Chingleput study once again underscores the point that vaccines are but of secondary importance in the control of disease in a highly endemic area. Unless concomitant and sincere efforts are made to control and improve the environmental factors, benefits from immunization programmes may not be commensurate with the money expended.

—Kamla S. Jaya Rao

23

Is BCG Vaccination Useful ?

Kamala S. Jaya Rao

The efficacy of BCG vaccination has never been questioned by most clinicians. We have perhaps assumed that the function of a vaccine is protection and therefore BCG vaccine will protect against tuberculosis. The protection, however, has never been complete. As WHO report says "BCG vaccine has been used extensively in tuberculosis control programmes since the early 1950's, when, for many countries it was the only feasible antituberculosis measure. At that time, it was known that protection from BCG vaccination was not complete, but there was little quantitative information in that respect. For this reason, several controlled field trials were undertaken. The results of these trials were contradictory, protection varying from nil to 80%. The main hypotheses put forward to explain this variation were that in some trials a vaccine of low potency had been used, and that infection with mycobacteria, other than mycobacterium tuberculosis had provided some natural protection against tuberculosis, thus masking the effect of BCG vaccine" (1).

BCG vaccination continued to be recommended as an antituberculosis measure nevertheless. It was however soon recognized that no field trial was undertaken in developing countries. Therefore the ICMR, with assistance from the WHO and the American government, conducted a 7½ year carefully controlled trial in Chingleput, Tamil Nadu. The study was planned sometime around 1968.

Chingleput is highly endemic for tuberculosis. It also has a high incidence of leprosy and filariasis. It was not covered extensively by the national BCG programme. The initial survey or "intake" comprised among other things tuberculin testing, X-ray examination and sputum examination. Of those identified as eligible on basis of x-ray examination nearly 3,50,000 people were included in the study and all except infants below one month were tuberculin tested.

Two batches of tuberculin, PPD-S and PPD-B, were used for skin testing. Prevalence of the disease, as assessed by a reaction of 12 mm or more to PPD-S, was 54% in males and 46% in females. The prevalence increased with age upto 25-35 years; and in males by 25 years of age it was 80% and in females, by 35 years it was 70%. Taking a reaction of 10 mm or more to

PPD-B as evidence of infection, after the age of 15 years almost everyone was a reactor. It is believed that "this massive sensitizaion is caused by environmental mycobacteria, which however, rarely cause living disease in man" (2).

On the basis of x-ray findings, the prevalence of pulmonary tuberculosis was 1429/100,000 in males and 978/100,000 in females. Those with two cultures positive, who are definite bacillary cases were 598 males and 205 females, per 100,000. Those with a single culture positive were 994 and 237, respectively. According to the experts, the latter cases are considered to be mostly 'early cases', but there may be some false positives also.

The population was then administered one of the two strains of vaccine chosen for the study. As mentioned earlier, the study was carried for 7½ years and follow-up was done at 2½ years and 4 years, also.

The results showed that BCG vaccination, over 7½ years, had no effect in offering protection against development of pulmonary tuberculosis. There were four salient findings in this study:

1. A very low disease to infection ratio.
2. Men were affected four times more than women.
3. The large majority of cases occured among those already infected at intake.
4. An almost universal skin sensitivity to PPD-B.

The study report concluded that after taking all possible reasons into account, "The high incidence of infection, the low incidence of disease among nonreactors associated with a high incidence of disease among reactors suggest that a large proportion of cases occur not as a result of primary infection but as a result of either endogenous reaction or exogenous reinfection" (2) "it appears therefore, that while the infec tion rate is high in this study population and possibly not declining, newly infected persons develop disease less frequently. Tuberculosis is highly prevalent, but only among the middle-aged and especially, elderly men—individuals who must have been infected many years, even decades ago. It is possible that it is not the primary infection but rather superinfection in the host already allergic from a previous infection that is the case of the 'adult' type of lung tuberculosis" (3).

The study thus shows that in an area of high endemicity, adults and older children may not be protected against tuberculosis by BCG vaccine. However, the reports warn that the results of the study may not be extrapolated to infants, since infant tuberculosis was not observed in this trial. The field trial was not designed to test the efficacy of BCG in infants and children. The relevant information on children is thus fragmentary.

In view of the high endemicity in many parts of the country, it is perhaps a correct view that BCG vaccination of infants should not be given up. The serious forms of childhood tuberculosis, namely, miliary tuberculosis and tuberculous meningitic, are said to be often fatal, even if chemotherapy is given. Let us assume that unlike in the already infected adults, BCG vaccine will afford protection to infants and young children. The question that needs to be settled is, under these circumstances, till what age will the child remain 'a good candidate' for protection? Ideally, BCG vaccine has to be administered in the neonatal period. However, considering that most births occur at home with no trained health personnel at hand, and in view of the various bottlenecks in the health delivery system, this ideal situation will not be achieved. The Chinglepur study showed that the incidence of disease even among the 1-4 year olds in the control or placebo population was nearly 2%. There is, therefore, an urgent need to know whether in a highly endemic area infants will be firstly protected and if so, till what age they respond. BCG vaccination is now a part of the ICDS programme and if we do not get an answer to this question early enough, the money spent on it may merely go down the drain.

The Chingleput study once again underscores the point that vaccines are but of secondary importance in the control of disease in a highly endemic area. Unless concomitant and sincere efforts are made to control and improve the environmental factors, benefits from immunization programmes may not be commensurate with the money expended. (The word environment is used in a broad perspective which includes socio-economic factors). I will not further dilate on this issue, since I have already done so in my editorial in Bull No. 79 (July 1982).

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From the Editor's Desk: Tuberculosis

This is the centenary year of the discovery of the tubercle bacillus. Every medical student knows tuberculosis by its eponym, Koch's disease. Robert Koch, a German physician and Louis Pasteur, a French chemist were pioneers in the field of bacteriology. Koch first discovered the anthrax bacillus and later, in 1882, the mycobacterium tuberculosis. No student of bacteriology can be ignorant of Koch's postulates for establishing the pathogenicity of an organism: the presence of the organism in the body, ability to culture it *in vitro* and reproducibility of the disease when injected into an animal. Koch travelled wide, investigating cholera in Egypt, plague in India, rinderpest in South Africa and malaria in Java. Koch was in Garrison's words (Introduction to the History of Medicine, Saunders, 1929) "one of the greatest men of science his country has produced." His one failure, if it can be called one, was his premature optimism that "tuberculin" will cure tuberculosis.

The problem of tuberculosis is colossal and cannot be tackled easily. No one group can be blamed for our inability to reduce the incidence of tuberculosis. But neither is there place for complacency. I hope that this centenary year will be used as an occasion to take stock of the situation in the country.

The disease is as prevalent today as two decades ago. The annual incidence is 3 per cent. There are approximately 8-9 million cases of radiologically active pulmonary tuberculosis, of whom 25-30% are infectious cases (ICMR Bulletin, Sep. 1975). Among communicable

disease, tuberculosis stands fourth in S.E. Asia and is also the fourth important cause of death in the region (WHO Chronicle, 31:279, 1977). It is another significant cause of death for children between 2-5 years of age (ICMR Bulletin, sept. 1975).

The rate of infection is the same in the rural and urban areas. If you are living in a city and travel a fair distance to work you may come into contact with 500 people every day, during travel, at place of work and while marketing. Thus every day you can come into contact with about 9 cases of pulmonary tuberculosis, of whom at least two will be infectious cases.

To what extent have we made an earnest attempt to reduce the disease? The WHO had stated that "the first aim of a bacteriological service in a developing country should be to perform sputum examinations by microscopy on a large enough scale to permit the accurate bacteriological diagnosis of every smear positive case and next to follow the progress of chemotherapy" (WHO Tech. Rep. Ser. No. 552). To what extent has the country taken steps to implement this? Do we have these facilities in every hospital and PHC? One must remember that for every smear positive case there is a smear negative, culture positive case. In other words, do we have adequate facilities even to detect half the cases?

Nagpaul has very lucidly traced the *epidemiology* of tuberculosis (J. Ind. Med. Assn. 71:44, 1978). He says, there is a clear cut and "gradual change from a comparatively acute and extensive disease among the young to a more chronic, less extensive disease among the elderly. It is significant that very similar changes were noticed in countries where tuberculosis has definitely declined." He says that every infectious disease starts as an epidemic which later declines or becomes endemic. Though the picture today in India is similar to that in countries where there is a definite decline, the disease is not on the decline but has become endemic; "there is a considerable incidence of fresh disease, sizeable self-healing, and death." I do not know whether this indicates that there is every danger of a fresh epidemic, when the young will be more extensively affected.

That the socio-economic nature of a disease should be understood by all truly interested in health, has been MFC's major tenet. Nagpaul has stated very significant reasons for our inability to control tuberculosis: "Environment is a fundamental factor in the ecological triad of tuberculosis. Socio-economic conditions can alter the epidemiological situation powerfully. Since BCG vaccine has no influence on the naturally infected population and chemotherapy merely eliminates some cases but cannot prevent cases from occuring, a tuberculosis control programme has a low potential for influencing the epidemiological curve. *So far, no reported study has successfully demonstrated the prime influence of antituberculosis programmes in controlling the disease, without a concomitant marked improvement in the standard of living of the people*." (Emphasis mine).

It is therefore little wonder that the seven-year Prevention trial study by ICMR, with assistance from WHO, has failed to show the expected beneficial effect of BCG vaccine (IJMR, Suppl. July 1980). One wonders whether the above quoted important factor was taken into consideration in this study. Apparently not. Scientists and doctors in this country have all too often taken the view that changes in socio-economic conditions are not within their purview and that they must work out solutions within the existing socio-economic framework. Many health programmes, including several nutrition and feeding programmes, were worked out and carried out with this attitude. The outcome—the failure—should not have been unexpected. Like men, very few diseases are non-respecters of economic status. Small pox was one such exception. Hence its successful eradication even without any perceptible change in the existing socio-economic conditions. We have had enough experience. The lesson is all too clear for those who wish to learn. Without any parallel attempts to improve socio-economic conditions, no health programme—whatever the input in terms of money and personnel can really succeed.

Throughout the underdeveloped areas of the world, the great philanthropic foundations became aware that 'medicine was an almost irresistible force in the colonization of non-industrialized countries'.

—**Zafrullah Choudhury**

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Research: A Method of Colonization

Zafrullah Chowdhury

Bangladesh, we say, has suffered from wars, poverty, overpopulation and natural calamities. Now we are coming to see that it has suffered as much if not more deeply, from "invested aid," or, aid given to primarily benefit the wealthy country. Let us look specifically at what has been developing in the area of medical research.

In 1905, Gates, main administrator of the Rockefeller assets, and a former Baptist minister, informed Rockefeller that "Quite apart from the question of persons converted, the more commercial results of missionary effort to our land is worth a thousandfold every year of what is spent on missions—our export trade is growing by leaps and bounds Such growth would have been utterly impossible but for the commercial conquest of foreign lands under the lead of missionary endeavor. What a boon to home industry and manufacture." (1)

Medicine: Force for Colonization

But it did not take long for these concerned imperialists to see that medicine could accomplish even more for them than the missionary. Throughout the underdeveloped areas of the world, the great philanthropic foundations became aware that "medicine was an almost irresistible force in the colonization of non-industrialized countries." (2) But this medical care must remain in their control if it was to continue primarily for their benefit. In the Rockefeller international health programmes, it was assured that "the entire control of all the money would be held by our people and not the natives." (3)

Now a new age has set out to "reclaim" a new republic, Bangladesh. In the past, as now, the glutted American market cried out for colonies to consume its goods. The medical research situation in the United States today contains the same urgency to find regions for expansion.

The Third World as a Laboratory

The procedure is somewhat standardized. The large university offers job opportunities and attractive side benefits to young professionals, and approaches the underdeveloped, overpopulated country with a plan related to health, nutrition, and family planning, financed

in large part, if not entirely, by the United States. Government officials from the host country, while maintaining their government offices, are employed by the U.S. university project, in limited number. This gives the project, the necessary "in" with the local government, while at the same time not being required to sacrifice any real control. No national is trained to the point where he could assume responsibility for the project, independent of the foreign power.

Avoiding Solutions

What are the benefits accruing to the underdeveloped host nations? In the line of scientists trained to carry on the work, it is nil. Further, the preponderance of foreign research stultifies any growth of local efforts, making a monopoly of health science. The population is used, while effective solutions to the problems of health and family planning are subtly avoided. This avoiding the real solution is an art that American medical researchers are often forced to practice in the U.S. Incredible sums of money are spent seeking cures for such killers as hypertension and cancer, cures which the scientist knows must be avoided, for, in the U.S. as here, discovering the real solution would lead to a radical change of the life style and economic system, and place in a rather uncomfortable position, the men who control research.

Johns Hopkins Again

A medical man with a missionary background and some former members of the Cholera Research Laboratory presented the Government of Bangladesh with a proposal for an International Institute for Health, Population and Nutrition Research. The Government has been asked to consider the proposal in light of the fact that funds for the Cholera Research Laboratory will no longer be forthcoming.

The proposal for the Institute is a clear example of national interests in the areas of health, population, and social services being absorbed into the control of a foreign state. Let us look more closely at the proposal itself which step by step illustrates how the Institute, primarily planned for the benefit of U.S. researchers, will cripple any attempt on the national level for an effective, independent health and family planning programme. Bangladesh will serve as a laboratory whose population may or may not benefit from the experiments and all will be done in collaboration with, under the management of and through funds and personnel in the control of the U.S.

In the Interests of U.S.A.

The proposal contains the following quote: "Establishment of a training programme for young investigators from developed countries such as the U.S. will require development of direct institutional ties with U.S. or other university and training institutions. These ties should be encouraged in order that young scientists from the developed countries can gain the skills and expertise necessary to address health, population, and nutrition problems in the developing world."(4)

It is not experienced scientists who are being sent to offer expertise. It is young men, needing experience, and who, if they follow the pattern of the Cholera Research Laboratory scientists, will only be speaking

English when they address the health problems of the developing world.

The proposal goes on to say that, "The key to the development of the proposed research programme will be the recruiting of expatriate scientific manpower to conduct the research programme." and that "This research programme does not envision the requirement for expanding the local technical and supporting staff." It then notes that "There are very few other Bangladeshi professionals that can be recruited in the requisite careers." It fails to further elaborate that there are three Bengali scientists at the lab who were trained elsewhere before the inception of CRL. However, the quotes do indicate quite clearly what has happened in regard to the CRL training of Bangladesh scientists, and what will happen with the new proposal. In both instances,—nothing. If during the 1960's alone over 100 US scientists were trained at the CRL, why, after the 16 years of its existence are there no Bengalis trained for the required positions. Certainly not because capable people can't be found. The intent of the lab had never been to train Bengali scientists. And neither is it the intent of the new proposal. The new proposal intends to maintain the hospital and field work as these are areas where the Bengali staff can be absorbed and they need not infringe on the scientific end.

Weight with government will come from other areas. The proposal tells us "Unrestricted funds must be available, so that the scientific staff can be recruited from any nation where they may be available." The programme is envisioned as operating with "multiple sources of funding from a variety of international agencies and governments" with over 50% of the funds, all of which will be controlled by the 'international' board, coming from the U.S. This is real power and weight with any government. Further, the proposal reads that "Crucial to the successful operation of the lab is adequate administrative back up support in the U.S. for management procurement, shipping of supplies, and equipment, as well as of management activities related to the expatriate staff."

Why Bangladesh?

"In conjunction with studies of immunological responses to naturally acquired infection," the proposal tells us, "there will be a program of studies of the human response to artificial immunization by a variety of routes." The study has begun with animals in the U.S. The next step will be the human population of Bangladesh.

Why is it that Americans, so fond of the "sacred rights of individuals" see only masses when they are looking east? Bangladesh, too, is a country whose people have individual longings and fears and even individual rights.

Once the individual is lost sight of, medical research becomes pointless. There is no one to serve, only the ego addressing statistics. Further, once the individual is lost sight of, scientific truth cannot be maintained. Perhaps we should have known it all along, but now the "proposal" spells it out for us.

And then one comes across this statement: "Improving the nutritional status of lactating women will lead to shortening of the period of amenorrhea resulting in

birth at shorter intervals. This would not only be detrimental to the welfare of the infant, but would also lead to rising birth rates and more rapid population growth. Chronic malnutrition may be effective in suppressing fertility by prolonging the duration of lactational amenorrhea..." What is the author trying to convince us of? That we should strive to maintain a malnourished Bangladesh? It is hardly sick people, or hungry people, that is the concern here.

Unapplied Research

The older cholera vaccine has proven virtually ineffective in preventing the disease. A later experiment with a cholera toxoid vaccine has proved equally ineffective. Now a study is being conducted that will further observe the two ineffective vaccines! 50% of all deaths in the nation are due to diarrhoeal disease. Over 60%, in the case of children. The major achievement of the CRL is simplified oral theray, but this remains unavailable, throughout most of Bangladesh, to patients in serious condition. Intravenous fluids for cholera were introduced in the 1830's but remain unavailable to rural Bangladesh even today. It has also been noted that villages whose water is contaminated by material from Matlab cholera hospital have attack rates for cholera and diarrhoeal disease that is 20 times higher than the average. It illustrates the efficiency of research, that can create and perpetuate an endemic area in which to observe the ineffective vaccines.

And all of this accomplished on an annual budget of 1.7 million dollars. One million going toward financing the home leaves, vacations, education, recreation, elaborate homes and furnishings, etc., of seven expatriate staff, while the treatment of diarrhoeal patients and a Bengali staff of 770, share the remainder.

Because of the framework of the proposal and existing institutional links with Ford Foundation, World Bank, and USAID, all research in areas covered by the Institute have to pass through the programme. Monopoly is the result. A monopoly of science stifling any growth of the Bangladesh scientific institutions. And the institute is not primarily, nor secondarily concerned with training Bengali scientists.

The large amount of foreign funds remaining in the full control of foreign groups will serve, consciously or unconsciously, as a pressure on government and state institutions. The result is freedom in Bangladesh for American research universities, and freedom in Bangladesh for American exporters of medicine and medical equipment, who may be researching new products for undesirable side-effects.

The Johns Hopkins Fertility Research Project in Bangladesh found in one of their own studies in Matlab on Depoprovera, that it disturbed menstruation radically, and lessened lactation. In another area of Bangladesh, it came up in the same indications in regard to menstruation and lactation. However, the Johns Hopkins Project, delected facts pertinent to the point of decreased lactation among Bengali women.

The Experts

Recently in Dacca airport, I met an acquaintance who said to me in the course of brief discussion that he had counted 72 Experts in Dacca on that one day alone.

And yourself, I asked, "73", he admitted. For a long time to come we will continue to credit foreign expertise unquestioningly with any knowledge it may lay claim to.

Who are these experts that come from thousands of miles away with the perfect plan for a village they have never seen, and a culture they have never lived? One such expert on smallpox eradication qualified as a motor mechanic. But then, he was a foreigner.

Our "western trained medical profession...sanitary inspectors' origination in the British Empire, the malaria program established by WHO...the Rural Health Centres devised by western public health experts, and most recently, the family planning programs," (5) all forms of expatriate expertise that have left the health and family planning system of Bangladesh crippled, confused, and utterly dependent.

The present split of the health and family planning ministries is the result of "expert advice" from World Bank and USAID planners who felt the population problem would be effectively met in this manner. Now we have the doctors being hired for family planning work and paid 39% higher than the health ministry doctor who is working in the same rural area within another narrow field. One can foresee the difficulties that will arise here without too much imagination. We will have family planning office in each union, and a sub-centre in each union, and offices for the health ministry. There are 92 maternity centres with twelve rooms each, and 205 Rural Health Centers. In another five years there is to be another 150 RHC's, but these with their 30 rooms each cannot be used for the family planning work. Nor can the Lady Health Visitors who are working in the Maternity Centres and are designated as family planning workers, be able to count on the doctors of the RHC for the back-up and support needed if their work is to be effective.

It is accepted that Bangladesh needs barrfoot doctors, people trained in the village to meet the needs of the villagers, but the World Health Organization experts proposed an elaborate 3 year programme to produce medical assistants. This training will take place in the towns and most of the students will have a background of 12 years formal education. In the centre visited, 65 out of 80 enrolled had had twelve years or more educational background, and nearly all felt that the course itself should be four years or more if the programme was going to equip them to "better serve the people." Serve, no doubt in Dacca, or Libya as experience attests. But the expert advisors of WHO refuse to see any other way.

These are the experts. They have been with us, as was noted earlier, for sometime. Will we sell ourselves out to them unconditionally now? There are real experts, however, and there is such a thing as appropriate aid. And neither is it impossible to discern the real from the "invested aid". Does the plan provide for local responsibility in the foreseeable future? Does it reach the real problems with realistic solutions? Is it honest in assessing its weaknesses as well as its strengths? The Companyganj Integrated Health Project in Noakhali is an example of appropriate aid. Now, under Bengal leadership which has been capably trained to assume the responsibility, it is meeting real health needs in a

practical way.

The nutrition and women's programmes of UNICEF were also attempts in the right direction.

And as we acknowledge the truly beneficial and helpful work of certain foreign assistance, neither can we fail to accept the fact of our own weaknesses, which surely exist. Yet we do not want to compound and nourish these weaknesses by importing others.

Death Blow to Bangladesh Health Care

But "inappropriate" aid is concerned with its own purposes. The proposed institute will give researchers free rein to use the people of Bangladesh and the institutions of Bangladesh to further the purposes that suit them. And it may well be the death blow to our own health system, whether scientific research or delivery of service.

The proposal threatens the sovereignty of Bangladesh. It perpetuates the image of starving baby syndrome and basket case Bangladesh, to attract funds for foreign researchers. It disregards the fact that there is talent and ability in Bangladesh, and there is a dignity both among our professions who will no longer tolerate being treated like school boys, and among our people in general who will not much longer tolerate being treated as mere statistics at the cost of their better health.

[Courtsey-Bangladesh Times]

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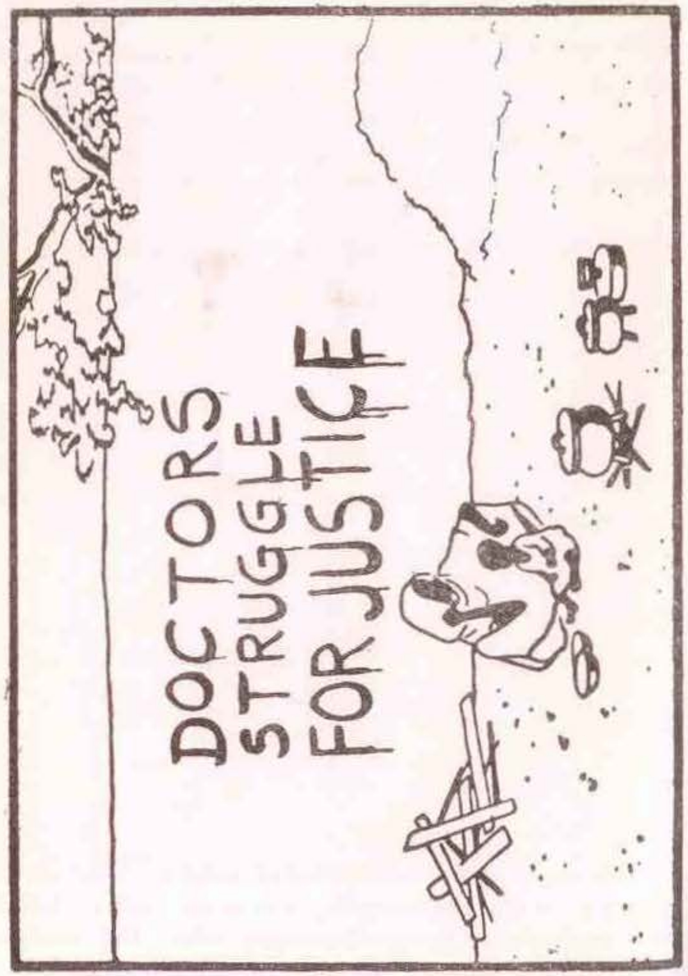
"This angry young man instead of asking "Why should there be so much of unemployment at all? starts blaming the small partner in this diminishing cake. The result is the caste war amongst the unemployed themselves."

—**Anant Phadke**



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Caste War By Medicos

Anant Phadke

The recent outrage by caste-Hindu medicos of Gujarat against reservation of seats for the Scheduled castes has brought to the fore the question of reservation of seats in general and of the philosophy behind the policy of reservations. Though the specific demand of the medicos was restricted to the abolition of reservation of seats for post-graduate medical education, there is a wide-spread feeling amongst non-dalit medicos against reservations for S.C. as such. It would not, therefore be inappropriate to discuss in some detail the issues of reservation of seats in our Bulletin.

Why Reservations?

Anybody who has even a rudimentary understanding of the history of India would no doubt agree that the untouchables (now called Scheduled Castes) were the most oppressed stratum of our society. They were systematically forbidden from acquiring any education or property. Anybody amongst these dalits trying to rise up in the social, educational hierarchy was ruthlessly suppressed. During the British rule and after Independence, the dalits had a chance to rise up in the social hierarchy. But this cold be done only by getting educational degrees since traditionally, the dalits owned neither property nor trade. For them, education was the only way to rise up in this modern competitive society. At the time of Independence almost all dalits were extermely poor and what is more important were culturally at a considerable disadvantage. Centuries of oppression had shaped their culture. Getting educated, mixing with others as equals was unprecedented in most dalit families and there was hardly any encouragement from the family and the community to the new generation of dalits. Dalits had to be given a push if they were to get out of their educational-social backwardness. It was not enough to give scholarships and other economic help to the dalits because the question was not of mere economic backwardness but cultural backwardness was equally important. Dalit students could not compete with, say, Brahmin students coming from educated well-placed families even if they got financial help.

Today's world is based not on co-operation but on fierce competition. In this society, the competition between a dalit student and a high-caste Hindu student would not be a fair and just competition because the high-caste student is already a few miles ahead because of his family background. If any competition has to be a fair one the, competitors must start from an equal base. Since the dalits had lagged behind, (thanks to our history) it was necessary to exempt the dalits from competition with the non-dalits and reserve seats for them in proportion to their share in the general population. In the absence of this reservation, the dalits would have been almost excluded from the modern organized sector that has developed in India after Independence. Modern India must undo the injustice perpetrated on the dalits by ancient India; non-dalits have to pay a price for the injustice done by their ancestors. In the immediate post-independence period this price was not much because the economy was growing and unemployment amongst the educated was not such a burning problem. There was therefore not much resistance to the policy of reservation of seats for the dalits.

Reservations and Unemployment of Non-Dalits

A non-dalit (Hindu or otherwise) who fails to get a job or a seat in medical college thinks that he would have got a seat had there been no reserved seats for the dalits. But this is an erroneous feeling. Reserved seats are hardly an important cause of unemployment. Official statistics show that unemployment amongst educated youth (those who have completed their 11 years of schooling) jumped from 9.1 lacs in 1966 to 49 lacs in 1976 i.e. more than fivefold (1). This has happened because there has been an economic crisis from 1966, and hence employment in the organized sector has been increasing very slowly. For example in 1975, out of 93 lac registered unemployed, only 400,400 got employment in the organized sector. Out of these 4 lacs, only 59659 were Scheduled Castes. Out of these S.C. merely 24703 got jobs because of reserved seats (2). (There are no reserved seats for dalits in the private organized sector) Would it be correct to blame the 24703 dalits who got jobs because of reservation policy for the unemployment of 49 lac educated job seekers? Educated non-dalit is naturally very much discontented because he is unable to find a job. He is misled by some casteist people from higher castes by pointing to the reservation policy as an important cause of unemployment. This angry young man instead of asking "Why should there be so much of unemployment at all?" starts blaming the small partner in this diminishing cake. The result is the caste war amongst the unemployed themselves.

Such a war amongst the deprived is ultimately in the interest of the ruling classes in India. Even if the demand to abolish the reservation of seats is accepted, it will not reduce the unemployment amongst the high-castes to any significant extent. The statistics for 1975 quoted above tell us that abolition of reservations would reduce the unemployment of the educated only by 5%. Please remember that the vast majority of the non-dalit section is really not going to be benefitted by this demand.

Objections against reservations for S.C. are raised by giving different kinds of arguments. Let us examine these briefly one by one.

Substandard Doctors

One of the objections against the reservation policy is "Because of the reservation-policy, we are producing substandard doctors and are thus playing with the lives of the people."

It is forgotten by the anti-reservationist that all S.C. students have to pass the final examination like all others before they start clinical practice. How can you call a doctor as substandard when he has passed his final examination? It might be argued that most S.C. students just manage to get passing marks. Firstly no objective, statistical basis has been provided for this statement. But even if this statement is true, how does it substantiate the charge of "sub-standard" doctors? Even if we want to make distinction between "qualified and good" and "qualified but not so good" doctors, can this distinction be made on the basis of marks obtained at the final examination? Is it true that those who get good marks provide a better quality care? MFC has been rightly stressing all these days that our medical education and the structure of medical practice is such that doctors cannot effectively help to guard the health of the vast majority of the poor population of our country. Any medico who thinks a little critically would agree that knowledge of medicine is not of central importance in general practice today, and the quality of care being offered to the community today cannot even be called "satisfactory". Against this background can we seriously talk about deteriorating quality of medical care due to S.C. doctors?

Why Should I Pay The Price

One objection against the reservation-policy is "May be my ancestors did injustice to dalits. But why should I be punished for this today by denying me my rightful place in the medical college? You should give the S.C. students whatever other help you want to give to enable them to study and compete. But why do you want to punish those intelligent, hard-working high-caste students by denying them the fruits of their labour? Why this injustice? Is it a crime to be born of a brahmin and be intelligent?"

This argument fails to grasp that by giving financial and other help to S.C. students, the high-caste students are also being "discriminated" against. They are ready to bear with this "injustice" because they know that these measures would not really help the S.C. much in their competition with caste-Hindus. The backwardness of the S.C. stems as much from lack of tradition of education as from poverty. It would be a matter of atleast a few generations before this heritage of centuries of oppression is wiped out. If we really want to uplift the S.C. from the enforced backwardness perpetrated by our ancestors, reservations for S.C. has to be there as one of the indispensible measures.

Secondly, this argument conveniently points only towards the disadvantage of being born of a non-dalit couple. It forgets the advantage of being born in a family with a tradition of education, and without a tradition of inferiority complex, dependency, and oppression. The intelligence of a brahmin student is mostly a product of social development, product of generations of culture conducive to the pursuit of study and of acquiring knowledge. Individual efforts of that particular student has a definite but very limited role.

Even this will to study and be respectable stems from a particular culture nurtured by generations of privileged conditions. Nobody has so far been able to prove scientifically that dalits are inherently, genetically less intelligent. The difference in intelligence as measured within the framework of today's educational system and evaluation methods, is all because of differences in cultural and nutritional standards. Why should a person suffer (without his fault) just because he/she was born in a dalit family?

The disadvantage of being born in a dalit family is being off-set by reserving seats, and the advantage of being born in a high-caste family is being off-set by the reservation policy working against them. Within the framework of today's economy based not on cooperation but on competition in the market, (of labour as well as goods) an economy which at any point of time *requires* unemployment, measures meant to help the S.C. necessarily lead to increased unemployment amongst the non-dalits, though this increase is very marginal. If our economy becomes really socialist then there will not be unemployment problem and hence no such acute tensions amongst various sections of our people. The demand against reservations for S. C. is getting an increasing support only because of the rapid increase in unemployment and other economic problems.

Reservations Make Them Lazy?

It is many times alleged that since S. C. students have an assured place through the reservation policy, they become lazy and do not try hard enough.

A few years ago there was a grain of truth in this charge. However, the term laziness is quite relative. Thus for example, it took not a inconsequential degree of will and effort on the part of a dalit student to pursue his studies upto the college level given his cultural and economic background. However, after having reached this level and knowing that he is going to get a job even by acquiring only passing marks at his degree examination (thanks to the lack of severe competition amongst S.C. for the reserved seats) he would not try his best in his studies. It is true that this was a reality a few years ago. But this kind of "laziness" was also present (though to a lesser extent) amongst the non-dalits in the immediate post independence period. Jobs were easy to come by for a graduate in those days and hence a non-dalit student in those times would not try his best, the way a student in the year 1980 is trying his best to get better and still better marks.

The picture is however, changing very rapidly. Unemployment and hence competition amongst S. C. is increasing very rapidly. According to official statistics there were only 3254 unemployed S.C. graduates in 1965, but this number rapidly rose to 64563 at the end of 1977, a 20 fold rise (3). Though a part of this rise is because of better statistical coverage, there is no doubt that there is phenomenal increase in unemployment and hence competition amongst the S. C. graduates. S. C. students therefore must now try hard to get as many marks as possible at their degree examinations. It is true that the competition amongst S. C. is not as severe as that amongst the non-dalits. This is because of the fact that the literacy rate amongst S. C. is still much lower compared to the high-caste hindus,

and the drop-out rate from schools and collleges is still higher. It is however certain that now there is very little scope for the S. C. students for being 'lazy (5).

This however, does not mean that had there been no reservations, there would never have been any scope for S. C. to be indulgent. On the contrary, the reality was such that in absence of reservations, the S. C. would have been in a completely hopeless position. They would have got demoralized because it was almost impossible for them to compete with the high caste Hindus because of the huge educational-cultural gap that existed in the immediate post-independence period, between the dalits and the caste-Hindus. It is because of the policy of reservations that a section of the dalits have to a certain extent come out of their inferiority complex, lack of self-confidence.

Reservations for How Long?

How long are the reservations for S. C. going to continue?

This depends on the socio-political atmosphere. But rationally speaking, reservations for S. C. must be continued till the S.C. are no more a socially, educationally backward caste. Today, take any major indicator of social educational development, like literary rates, drop-out rates etc. we find that S. C. are still a backward caste. When these differences will be no more, then caste background will not be a factor in deciding the fate of competition between two students or job seekers: the fate would depend entirely on the individual merit of the students-job seekers concerned. (This of course presumes that both come from the same economic background and that the examiner is not casteist). We cannot tell how much time this will take. We are however sure that the S. C. cannot (even if they want to) remain permanently backward to get the advantage of reserved quotas. This is because of the increasing unemployment and hence competition amongst themselves referred to above.

Introducing Economic Criterion

The time has however come to introduce an economic criterion along with the caste criterion in the reservation-policy. Those scheduled caste students whose parents' income is above say the minimum level beyond which income tax is levied, should not be given seats through the reserved quota. Most of the well-to-do S.C. are educated because by and large S.C. do not own property. At least the father in a well-to-do S.C. family is usually well educated and understands the importance of education. A student coming from such a S.C. family will not be at much disadvantage, vis-a-vis a high-caste student. Today, majority of the reserved seats are probably going to those S.C. students who come from a comparatively well-to-do, white-collar, educated S.C. family. The students coming from poor and uneducated S.C. families really require support. Introduction of an economic criterion will achieve this effect.

Likewise a proportion of seats should be reserved for poor non-dalits. This would leave very few open merit seats. But that does not matter at all. What is important is that the competition should be fair, it should only compare between the *individual* efforts and

intelligence by discounting the effects of social background and culture. A student has no control over his social background and hence if a competition has to be a fair competition, the effect of differences in social background has to be eliminated as far as possible. Reservation-system does this job and hence has to be continued as long as significant differences exist amongst various communities in our society.

Reservations and Social Upliftment

It is sometimes argued that reservations have failed to achieve the desired effect of upliftment of the S.C. community. It has only created a "Babu-layer" amongst the S.C.; a layer which is least concerned about their poor, backward community.

This argument is misdirected. If only a few people amongst the S.C. benefitted through reservation-policy, it is not the fault of the reservation-policy but of the strategy of economic development adopted after Independence. This strategy has lead to a very truncated and uneven modernization besides extreme inequality in all spheres of life. That most of the educated and well to do S.C. families do not bother about their own community is again not the fault of the reservation-policy but of commercialization of our life. Moreover selfishness is not exclusive to educated S.C. families. How many high-caste well-to-do persons bother about the vast majority of poor people belonging to their own caste? Like in any other caste or community, a small but important section of educated S.C. have thrown their lot with the struggle of the poorer dalits and have provided leadership to their struggles. This would not have happened to any significant extent in absence of the reservation policy.

All said and done, it must however be emphasized that the qestion of reservation of seats for S.C. should not be equated with the uplift of the whole S.C. community. Most of the S.C. are working as unskilled labourers. Their major problem is that of controlling the products of their labour. This is forgotten many times by dalit leaders coming from an urban and middle-class background.

Reservations at Post-graduate Level

This has become THE burning issue today in Gujarat. I do not know concretely and in detail what arguments have been put forth by the anti-reservationist medicos in Gujarat against post-graduate reservations. I also do not know the exact severity of the problem caused by the carry-forward system. But judging from reports in the Times of India, it does not seem that the anti-reservationist have any strong case for the abolition of reservations at the post-graduate level. The carry-forward system needs to be abolished. But there is no rational basis for abolition of reservations as such at the post-graduate level.

The argument about "playing with the lives of the people" will not do. If reservations at graduate level does not produce substandard doctors (equivalent of "playing with the lives of the people") as shown above, why should reservation at post-graduate level mean playing with the lives of the people? What is so heavenly about post-graduate education?

It is sometimes argued that it is enough to give a push to a S.C. person through various forms of protection till his graduation. After this he should stand on his own. The trouble with this argument is that it draws the line quite arbitrarily. Likewise it can be argued that it is enough to give a S.C. person special concessions till he passes out of school; this much push is enough and at college level he should stand on his own. A similar argument can be given against reservations for jobs after graduation. All these lines are arbitrary,

S.C. collegians (premedical) as a *social* layer (we are not concerned here with individuals) are backward compared to high-caste Hindu collegians as a social layer. To offset this effect of social history, they therefore require protection from open competition with the high-caste Hindus. Similarly an average S.C. graduate is backward compared to *average* high-caste-Hindu, for reasons beyond his control and hence needs protection from competition with average high-caste Hindu graduates.

The Times of India, 21st February reports that the Gujarat Junior Doctors' Association has suggested that there should not be any reservations at post-graduate level for S.C. Instead they should be given 20 marks extra this year and this figure should be reduced to zero in 4 years. This figure of 20 grace marks (or any other figure) is arbitrary. Why not 40, why not 5? As explained above, there is a *principled* basis for reservation-policy—the principle of fair and just competition. Laws should be made according to this principle of eliminating the effect of differences in social, historical background, and comparing only *individual* effort and intelligence. Arbitrary figures violate this principle.

Would it be futile to extend the following appeal to the non dalit medicos? "Please do not fall prey to casteist, racist, irrational propaganda; think scientifically; find out the real cause of the problem and struggle against it. Please do not engage in a castewar which is *not* going to solve the problem of vast majority of non-dalit or of dalit student."

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"Under all circumstances a man may get stuck, lose himself and have to turn round and go back a long way to find himself again. Only under certain socio-economic circumstances will be suffer from schizophrenia".

—Ramana Dhara

"*Constantly I get this feeling that I am perfectly normal and that I am wasting my money coming here!*"

26

The Attitude of Society and the Psychiatrist Toward Madness

Ramana Dhara

Most people seem to take a mad person for granted. Accompanied by a joke or two about his crazy behaviour, the general impression is that he has a "screw loose" somewhere. Few people realise that no individual behaves in such a way without a reason. Fewer still understand that "going mad" is not instantaneous but the result of a process which has been going on for a long time. It is only when the person is unable to live with this process anymore that he breaks down and gives himself up to the fantasies of his mind.

For a person confronted with emotional breakdown, what are the alternatives that present themselves?

Rather, what is likely to be done with him by the people he lives with? This largely depends on the economic status and cultural practices followed in the community. In our communities the tendency is either to diagnose the crazy person as being possessed by a devil (and various religious and supernatural methods are employed to extract this devil) or a person who is "plain mad", is left to his own devices which invariably means emotional and economic deterioration.

It is only in the urban areas that the alternative of the mental hospital presents.

This article deals with how psychiatry looks at the phenomenon of madness and tries to show that instead of being liberating for the individual, it is actually an agent of suppression. One look at any mental hospital will reveal the bizzare and inhuman results that modern medicine has effected upon people. Patients stare at you blankly, each one with his own stormy history. There is little personal association between the staff and patients, only a cold neutral, suspicious wall. In fact there is a lurking fear in many doctors and nurses that too close an association with patients may result in they themselves going mad and funnily enough this is a standard joke about psychiatrists.

How does a psychiatrist elicit a history, diagnose and treat someone with abnormal behaviour? Largely from the symptoms. Taking a common example, when a person exhibits disturbed behaviour, it is usually a member of the family who brings the person to the psychiatrist stating that she/he is behaving oddly. After a brief interview which consists more of asking about what the patient has been doing rather than how and

why he is doing so, the psychiatrist arrives at one or other of the following conclusions: either a psychosis (where the person is out of touch with reality) or a neurosis (in touch with reality).

Little emphasis is placed on the existential situation in which the person breaks down. At best it is mentioned as a precipitating cause of his illness. No attempt is made to go into the details of his family back-ground, of the relationships of the various family members with one another and the family unit as a whole. No enquiry is made whether the person's moods of sadness, anger, frustrations, despair are a product of his interaction with the family. No attempt is made to increase the understanding and awareness of the patient and certainly no encouragement is given to him to act on his genuine feelings and desires and thereby attempt a solution to his problems. In short, instead of trying to view the patient's problems, the patient himself is considered a problem. That personal change is very necessary for the patient is over-looked by the psychiatrist, who through his technical understanding of the disturbed behaviour, views the patient as "one in whom madness resides." The commonest diagnosis arrived at is schizophrenia, or "split personality". Could we not view this condition as the adoption of false roles by people whose true roles have not been allowed to develop or have been consistently rejected by the people around them? If we view it in this manner, we begin to perceive the relationship between the individual's madness and society. If an individual's sense of reality and experience (consciousness) is negated by the people around him (usually the family which unconsciously mirrors social values) then his consciousness becomes "unreal" in contrast to the "real" consciousness of the others. The latter have been powerful enough to impose their consciousness upon the former. Disturbed behaviour exhibited by the individual is a response reaction to his isolation and alienation. Drug addiction is another manifestation of his isolation, where the drug is used as an escape mechanism. In the power equation between the two sides "reality and unreality" the psychiatrist invariably acts on the side of "reality."

The central theme running through academic psychiatry is that there is something inherently wrong with the person that causes him to feel and behave in an abnormal way. In other words, a person is either born or destined (genetically, bio-chemically etc.) to become mad at some stage of his life. This is some what analogous to the Hindu theory of Karma. Translating Karma into psychiatry! "it is impossible to escape from the cycle of one's own genes and amino-acids since they have been pre-determined." This sort of pre-judgement of human behaviour makes it easier for the psychiatrist to rationalise his suppressive therapy on the person who has broken down, and also later explain away the relapses which occur. What evidence exists to prove that schizophrenia is determined genetically or biochemically? As yet there is no conclusive evidence. Every few years a "revolutionary" break-through is announced that some chemical or other is responsible for the abnormal states experienced. Such discoveries usually end up being disproved. For example, when a chemical cousin of LSD was discovered in the brain it was hypothesized that its fluctuation was responsible for hallucinatory mental states. This theory was popular until it was shown that this fluctuation occured in normal people too.

That disturbed behaviour does seem to run in certain families is true and this is probably responsible for generating the notion that schizophrenia is hereditary. Recent work on genetic transmission of schizophrenia has thrown doubt on this notion. On the other hand, it is increasingly being recognised that certain patterns of family interaction can be disturbing and thus generate disturbed behaviour. It is important to take note of this since it can afford a key to this much mystified disease. By placing the disturbed behaviour of the individual in the context of his family, it is possible to study the emotional dynamics and situations which produce such bizzarre behaviour, which when seen alone seems utterly incomprehensible.

A mad person is oppressed by his situation and his madness is a result of and reaction to his being unable to live any more with this oppression. In a bid to free himself from this oppression he perpetrates an exploding violence upon others or an imploding violence upon himself. In the former case, he will be branded by psychiatrists as a homicidal maniac and in the latter a suicidal depressive. We also begin to see why women are doubly oppressed. Society, operating through the family, places many more restrictions and constraints upon women than men, thus oppressing them both socially and sexually.

Standard forms of psychiatric therapy are directed towards suppression of symptoms and feelings. In the main they consist of electro-shocks, tranquillizers and surgical resection of part of the brain. Who has the time to sit and talk to a guy who is "nuts"? A good cure is one where the patient is quiet and polite. David-son's renowned Textbook of Medicine reinforces this view saying that schizophrenics should be "allowed to participate inconspicuously on the fringe of group activities."

Even though these suppressive measures have been proved to cause irreversible brain damage by destroying brain cells, therapists have not heeded these unfortunate side effects saying that the treatment is in the best interests of the patients. These modes of treatment are de-humanising, de-personalising and rob the individual of the capacity to feel and act. They are largely carried out in mental institutions and asylums. Consequently it is in these asylums that we see people suffering from the most serious side effects, vegetating away in their meaningless existence.

It is not surprising that so dehumanising a form of scientific therapy should exist in the society in which we live. The economic framework of society which generates unemployment, poverty, competition turns life into a never ending rat-race for survival. This social insecurity reflects upon the individual through the family, the family being the representative unit of society. The social problem becomes an emotional problem for the individual, as he begins to view his existence as an unwanted and rejected one by his family and therefore by society.

Take the following situations—

— A child who is the victim of emotional tensions existing between his parents who have been forced to marry, live together and reproduce because it is socially correct to do so. He develops psychological problems due to the anxieties of his formative years. ......

— A girl trapped by the rigidities and orthodoxy of a joint family finds that she has no control over what to do with her life and ultimately the only control she does have is to decide whether to live...

— A man unable to find employment and feed his family seeks refuge in the dullening effects of alcohol and drugs in a bid to forget about the problems he faces......

— An old man unable to work any more becomes economically un-productive and a burden on the family and drifts off into senile psychosis......

— The competition to survive alienates man from man and ultimately man from himself.

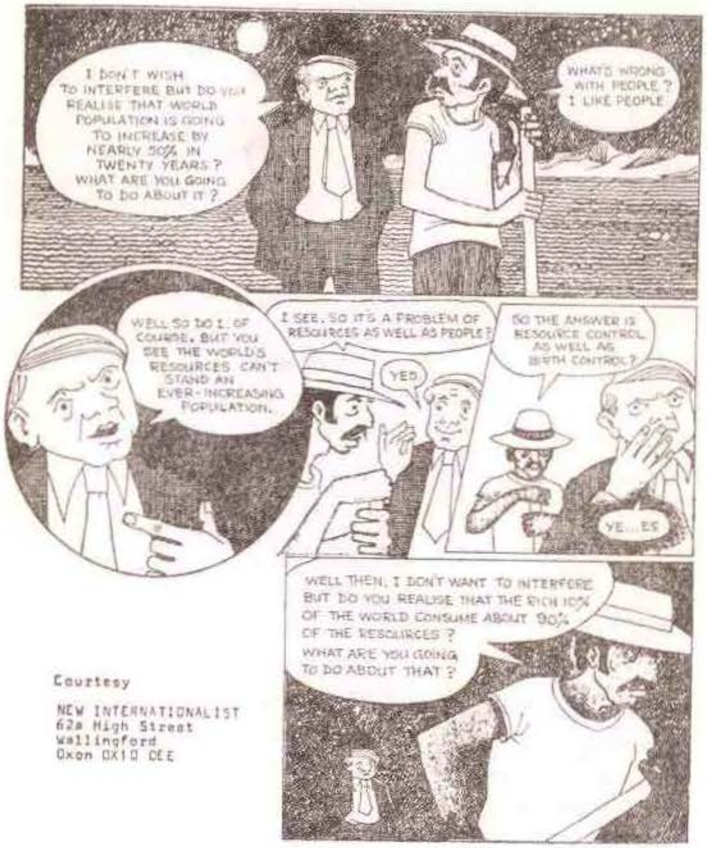
In this apparently hopeless situation what are the alternatives available for people who have become alienated to find themselves again? It must be emphasised that alternatives are present and must be actively sought for by the alienated. Basically it lies in becoming aware of the oppressive situation one is entrapped in and acting to change the situation both at an individual and social level. "We must change the world in order to change ourselves" writes Christopher Caudwell in his critique on psycho-analysis. Groups like the Radical Therapists (MFC Bulletin No. 5; May—1976) seem to advocate and implement this ideology in therapy which consists of groups of patients engaging themselves in various activities directed towards revolutionary social change concurrent with discussion and reflection and action upon their individual problems. R.D. Laing, the anti-psychiatrist believes that the schizophrenic experience is a "voyage" which has to occur without hindrance and through which the person has to be helped and guided. This voyage comes to its natural termination over a variable period of time and acts as a self-healing process if allowed to occur freely.

To sum up a quotation from Laing's "Politics of the Family":

"Marx said: 'under all circumstances a Negro has a black skin, but only under certain socio-economic conditions is he a slave'. Under all circumstances a man may get stuck, lose himself and have to turn round and go back a long way to find himself again. Only under certain socio-economic circumstances will he suffer from schizophrenia." □

"Doctors in India should of course strongly preach family planning in the interest of the health of our womanhood. But one should not be under the impression that we are making any dent in solving the problem of resources by carrying out family planning programmes."

—Anant Phadke


I DON'T WISH TO INTERFERE BUT DO YOU REALISE THAT WORLD POPULATION IS GOING TO INCREASE BY NEARLY 50% IN TWENTY YEARS? WHAT ARE YOU GOING TO DO ABOUT IT?
WHAT'S WRONG WITH PEOPLE? I LIKE PEOPLE
WELL SO DO I, OF COURSE. BUT YOU SEE THE WORLD'S RESOURCES CAN'T STAND AN EVER-INCREASING POPULATION.
I SEE. SO IT'S A PROBLEM OF RESOURCES AS WELL AS PEOPLE?
YES
SO THE ANSWER IS RESOURCE CONTROL AS WELL AS BIRTH CONTROL?
YE...ES
WELL THEN, I DON'T WANT TO INTERFERE BUT DO YOU REALISE THAT THE RICH 10% OF THE WORLD CONSUME ABOUT 90% OF THE RESOURCES? WHAT ARE YOU GOING TO DO ABOUT THAT?

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Family Planning and the Problem of Resources

Anant Phadke

Kamala Jayarao, in her editorial to the 65th issue (May 1981) of the Bulletin, has made a remark that there are not enough resources in the world to sustain an increase in the population at the present rate. I would like to debate this point because such a view is quite widespread. I would argue that it is not the increase in population which has posed the problem of inadequacy of natural resources. What is really important is the wasteful and reckless utilization of resources by advanced capitalist countries.

Take the example of food. The per capita consumption of food in the underdeveloped countries (UDCs) was 506 pounds per capita per year. This is only an average, which hides gross inequality in consumption of food amongst different strata of our population. If everybody in the UDCs got 506 lbs. of grain then there would not be any hunger in these countries. The per capita annual consumption of food in the U.S. however is 1760 lbs. i.e. more than three times as much as in the UDCs. (These figures are 10 years old. But that does not affect my argument). Nine-tenths of it is the form of meat, poultry or dairy products—thanks to the "American Way of Life," which breeds overnourishment leading to diseases like cardiac ischaemias, hypertension, etc. Americans get their grain via pigs and other animals, that too in a highly processed and concentrated form—thanks to the giant agro-business companies and their advertising. This is a very costly way of getting one's food since it takes about 20 lbs. of grain to produce one lb. of beef and seven or eight lbs. of grain to produce one lb. of pork. The costs mount if you take into consideration the cost of sophisticated medical care to look after the problems created by ingestion of so much of animal fat. The American Medical Association has recommended a one-third reduction in the meat consumption of the American population. In a matter of 10 years (1966 to 1976) the average American has added 350 lbs. of grain in his annual diet! This addition has merely increased the profits of the agro-food business (ninth largest in the US) and of the medical profession.

This increase has been achieved by the use of increasing amounts of synthetic fertilizers. It has been estimated that merely to maintain an average yield of

150 bushels of maize, nitrogen fertilizer has had to increase from 129 to 480 lbs. per acre. (see "How the Other Half Dies", 1977 Pelican, page 305). American companies could squander natural resources in this manner because resources throughout the world are at their command—thanks to the system of Neo-imperialism and the power of the American army. Robert McNamara until recently the President of the World Bank, has himself pointed out that the U.S. has about 6% of the world's population but consumes over 35% of world's resources.

Take the case of energy about which so much is being talked about. The World Bank figures show that "on as average, one billion people in the countries with per capita annual income below 200 dollars consume only about 1 percent as much energy per capita as the citizens of the U.S." Schumacher in his famous book "Small Is Beautiful" makes an interesting calculation. He has shown that in 1966, the "rich" countries accounted for 31% of the world's population but consumed 87% of the energy utilized in the world. He now argues—suppose their population grows only at the rate of 1¼% per year, suppose the population of the poor countries grows at the rate of 2½% per year, further suppose that the fuel consumption per head increases at the rate of 2¼% and 4½% per year in the rich and poor countries respectively. With this increase in population and per capita energy consumption, till the year 2000 A.D. the world would require an additional 1707 million tonnes of coal equivalent i.e. more than thrice as much as the world was consuming in 1966. Out of this increase, more than two thirds would be consumed by the rich countries!

The threat to the world resources then is not from the increasing population [which is mainly taking place in the "poor" countries] but from the reckless, wasteful use of resources [which is mainly taking place in the "rich" countries]. Yes, American economy has been using energy in a reckless manner. For example, the per capita consumption of energy in the U.S. is twice as much as in the West Germany though the standard of living of the people in both the countries is almost the same.

The way to solve the problem of resources lies in rejecting the "American Way of Life" [which creates unnecessary problems and spends resources on solving them]: finding out ways to lead a modern but sensible way of life. Doctors in India should of course strongly preach family planning in the interest of the health of our womanhood. But one should not be under the impression that we are making any dent in solving the problem of resources by carrying out family planning programmes.

It is significant to note that though research on male fertility control was regarded as a priority area, less than 10 percent of the total research budget for new methods was allocated for this. The trials were entirely in the area of female methods.

—Mahtab Banerji

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Male Contraception

Mahtab Banerji

Though family planning ought to be the concern of both man and woman, the burden invariably falls on the latter. The factors responsible for this are: (a) the prevalent socio-cultural-political attitudes towards man vis-a-vis woman, (b) man's preoccupation with his sexuality and fear of losing libido by any intervention and (c) non-availability of suitable and convenient reversible methods of controlling male fertility. In the last three decades, tremendous efforts have been made to understand the physiology of female reproduction. Effective hormonal methods and intrauterine devices for controlling female fertility, in a reversible manner have been developed. Compared to the understanding of female reproductive biology, knowledge of male reproductive biology is very deficient, because few investigators have considered it be an important area of research. Suppression of ovulation appears to be easier than complete suppression of sperm production. Though several agents (sex hormones and chemicals) are known to produce oligospermia and influence sperm motility, the relationship between the magnitude of these changes and infertility is difficult to assess.

Less Research on Males

Condom, coitus interruptus and vasectomy are the only male methods of contraception currently available. The failure rate with condom is considered to be too high to make it a reliable method. Surprisingly, little effort has been made to improve the conventional condom to make it more reliable. A simple innovation like a thin bi-layered condom with a powerful spermicidal agent sandwiched between the two layers may improve its effectiveness just as the combination of diaphragm and jelly provides better protection in the woman than diaphragm alone. A more sturdy and yet a thin, reusable condom would reduce the problems of disposal. Materials research in this direction is required.

Male fertility is regulated by several factors such as (a) hormones which regulate steroidogenesis and spermatogenesis, (b) the male accessory glands and organs which are under strict hormonal control and which are responsible for the production of seminal plasma and (c) the psychogenic determinant which controls masculine behaviour and libido. For a male contraceptive to be acceptable, it should be safe, reliable and should not interfere with male libido. The psychogenic component is the most difficult to manage as far as the male is concerned.

In the last decade, an opinion that men should share the burden of family planning has been created through pressure from women's groups. The World Health Organisation under its Expanded Programme for Research in Human Reproduction (HRP—an important funding body for research in family planning) considered the development of oral and injectable birth control drugs for use by men, as a priority area for research and a task force on "Methods for the Regulation of Male Fertility" was created in 1975. HRP has two types of programmes. Through its net-work of collaborative centres for clinical research and training, it carries out multi-centred studies on safety and acceptability of the existing, improved and new methods of fertility regulation, to assist the national family planning programmes in developing countries. It also funds research on development of new methods of fertility regulation. The 1975 annual report of HRP lists ten such task forces out of which nine deal with female fertility and only one with male fertility.

It is significant to note that though research on male fertility control was regarded as a priority area, less than 10 percent of the total research budget for new methods was allocated for this. The trials were entirely in the area of female methods. The composition of task forces and the pattern of funding by WHO has been more or less similar from 1975 to 1980. Under the task force on Regulation of Male Fertility, Phase

I & Phase II clinical trials were initiated on five combinations of progestogen/androgen formulations and Cyproterone acetate—an antiandrogen with some progestogenic properties. These agents limit spermato-genesis without affecting libido. The task force also funded basic research in other areas of male fertility such as Inhibin (a naturally occuring testicular substance which selectively inhibits spermatogenesis, without interfering with testesterone production), Androgen Binding Protein and some other areas dealing with sperm maturation in epididymis.

The difficulties

The clinical trials were handicapped by the difficulty in finding volunteers. Basic research was thought to be too expensive to sustain and by 1980 the task force on male methods was phased out on the recommendation of the advisory group. The following gives the state of art with regard to hormonal/pharmacological methods for male contraception [WHO 9th annual report, 1980.]

"Following the recommendation of the Advisory Group to the Programme, research in the Task Force on the Regulation of Male Fertility was phased out in 1980. The Advisory Group had recognized the need for new methods of birth control for men but considered that this could not be achieved without a very considerable effort in basic research which would be very costly and time-consuming. Such efforts were being sponsored by research councils in several developed countries. This research is being closely monitored by the Programme for breakthroughs that might

provide a base for mission-oriented research by the Task Force."

HRP continues to fund some work on male methods for fertily regulation in a task force on "Plants for Fertility Regulation". A computerised data base has yielded over 170 plants for the control of male fertility. Bioassays are being carried out on few of these from the priority list. WHO is also supporting research on gossypol, a toxin from cotton seeds with antifertility effect in males. The People's Republic of China puts great emphasis on male contraception and has carried out clinical trials with gossypol in over 10,000 men. Though the Chinese experience so far has been encouraging, it is unlikely that many other countries will intiate trials with gossypol because of its toxicity in several species of animals. In man, gossypol produces hypokalemia but this can be counteracted by oral potassium supplements. Gossypol analoguge without toxicity will have to be developed for wider acceptance.

Vasectomy or male sterilization is effective, safe and simple. Its acceptance is claimed to be increasing in developed and developing countries. The most significant complication of vasectomy is sperm granuloma, an inflammatory reaction to the extravasation of sperm from either the vas or the epididymis into the surrounding tissues. However in most cases sperm granulomas remain asymptomatic with no adverse effect on the man's health. Another sequel of vasectomy is the development of sperm specific antibodies. The clinical implications of these antibodies are yet to be understood. Studies have shown that sperm antibodies do not lead to autoimmune disease, nor do they reduce the chance of successful vasovasectomy (reversal of vasectomy. A recent report claimed that antisperm antibodies in vasectomised male monkeys aggravated atherosclerosis. Further invesigation is needed to establish this.

Mentally healthy, sexually well adjusted men do not experience psychological problems after vasectomy, but some men of neurotic temperament complain of impaired health and libido. This problem can be minimised by educating the man regarding the nature of the surgery before the operation and by reassuring him.

In conclusion, the goal of developing chemical/hormonal male contraceptive remains elusive, chemical and physical devices to occlude the vas and immunological approaches have been thought of, but are still at the experimental stage. With improved surgical techniques for vasectomy and vasovasectomy and proper education, it may be possible to increase the acceptance of vasectomy. The conventional condom should be improved upon to decrease the failure rate and to make it reusable.

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Medico Friend Circle

Perspective

The medico friend circle is a group of socially conscious individuals, interested in the health problems of our people. mfc is trying to evolve an appropriate approach towards developing a system of health and medical care which is human and which can meet the needs of the vast majority of the population in our country.

The existing system of medical care, we have realized, is not geared towards the needs of the people. It requires a fundamental change. Such a change would occur as part of a fundamental change in the total social system in the country, since the medical system is only a part of the total social system. mfc believes that the potential created by modern medical science cannot be realized fully without a fundamental change in the social system.

What is wrong with the existing medical systems in India ?

Though after independence there has been a rapid growth of the medical services organised by the Government, Private Practice remains the dominant feature of medical care in India. In private practice, medical care like any other commodity in the market is available only to those who have money to pay. The medical profession resembles any other commercial sector and therefore has been dominated by concern for money rather than for people. Commercial competition and personal interests of doctors lead to numerous malpractices.

This behaviour is encouraged and promoted by profit oriented durg companies which dump many useless or even harmful drugs onto the consumer by co-opting the doctors, through their sales promotion techniques.

mfc upholds the interests of the people and

* wants medical care to be available to every one irrespective of his/her ability to pay.

* wants to develop methods of medical intervention strictly guided by the needs of our people and not by commercial interests.

Since purchasing power is mainly concentrated in urban areas, commerical medical practitioners are also concentrated in cities and towns. This over-crowding of doctors is partly responsible for the overgrowth of

specialists. This has resulted in the denigration of the role of a basic doctor to just a "cough and cold" doctor. The training of doctors has also been influenced by this situation. Hospital based training by Western and Urban oriented specialists produces a graduate conditioned to urban and hospital practice. Therefore even after prolonged training in a medical college, such a graduate is not capable of dealing with the situation in rural areas.

mfc would work towards

* a pattern of medical care adequately geared to the predominantly rural character of our country and.

* towards a medical curriculum and training tailored to the needs of the vast majority of the people in our country.

To further their narrow professional interests, doctors have established a monopoly control over medical knowledge and medical practice. Medical knowledge has been jargonised and a halo has been created around it. This monopoly and mystification opens the door for domination by the medical profession over patients and by doctors over nurses and other paramedics.

mfc stands for

* popularization and demystification of medical science and

* believes that different categories of medical professionals be regarded as equal members of a democratically functioning team.

Commercial interests demand a growing market for drugs and medical therapies and this is partly responsible for medical practice being reduced mainly to curative services. It denigrates the primary role of preventive and social measures. Drugs, surgery, even vaccines have so far contributed marginally to the improvement in people's health in different countries. In spite of the primary role of socio-economic development in improving health of a people, a wrong belief is promoted that medical intervention—use of drugs, surgery etc.,—is primarily responsible for improvement in the people's health.

* mfc realizes the importance of curative technology in saving a person's life, alleviating suffering or preventing disability but

* stresses the primary role of preventive and social measures to solve health problems on a social level.

The government health sector is not commercial and the PHC doctors are supposed the emphasize preventive medicine. But this sector has not changed the basic pattern outlined above. The doctor working in a PHC is inclined and trained to do mainly curative work and generally reflects the typical attitude of the upper class, urban, elite professional. Preventive measures when undertaken are therefore reduced to pure technological and administrative measures without any social content.

mfc stand for

* the primary importance of preventive measures, planned and carried out with active participation of the community and

* for democratic decentralization of responsibilities wherever possible.

Medical practice in its existing form reflects and reinforces some of the negative, unhealthy cultural values and attitudes in our society, eg., glorification of money and power, division of labourers into manual and intellectual workers, domination of men over women, urban over rural, foreign over Indian....

mfc works towards

* a kind of medical practice built upon human values, concern for human needs, equality democratic functioning.

In the present medical system, non-allopathic therapies given a step-motherly treatment. Allopathic doctors call non-allopaths quacks without knowing anything about their systems of medical care. Equally unscientific are the claims of success made by some non-allopaths and by some drug companies. Prejudices, ignorance, self-interest have prevailed over open-minded scientificity in this important area of medical care.

mfc believes that

* research on these therapies be encouraged by allotting more funds and other resources and

* that these therapies be encouraged to take their proper place in the modern system of medical care.

mfc thus tries to foster among medicos a current upholding human values and aims at restructuring the medical profession to enable it to realize the potential

created by modern scientific medicine.

mfc offers a forum for dialogue/debate, sharing of experiences and experiments with the aim of realizing the goal outlined above; and for taking up issues of common concern for action.

Activities

mfc members are spread all over India and try to propagate the perspective of mfc through their work. Some members are engaged full-time in organizing health projects in rural areas.

Bulletin

mfc is as of today, mainly a throught-current and the monthly Medico Friend Circle Bulletin now in its ninth year of publication, is the medium through which members communicate their ideas and experiences to each other. The bulletin publishes articles broadly reflecting the mfc perspective on health problems. Running the mfc bulletin is our chief common activity.

Anthology

Publication of the Anthology of selected articles published in the bulletin has been a milestone in the development of mfc. The first anthology—In Search of Diagnosis—was very well received and was rapidly sold out. KSSP translated it in Malayalam (two editions). The second anthology—Health Care which way to go—is almost sold out. Reprints of the first and second anthologies are ready.

Annual Meet

Once a year mfc members gather at an All India Annual Meet to explore a relevant topic through discussion or to understand the functioning of a particular health care project in terms of a chosen topic. Since 1974, annual meets have been held at Ujjain (relevance of the present health services), Sevagram (present health problems), Hoshangabad (Indian nutritional problem), Calicut (community health approach, role of doctor in society), Varanasi (unemployment among doctors), Jamkhed (community health worker), RUSHA Project (community paediatrics), Tara (misuse of drugs by doctors), Anand (prejudice against women in medical care), CINI, Calcutta (alternative medical education).

The Annual Meet provides an opportunity for far-flung medico friends from different parts of the country to meet each other for an intensive dialogue and to chalk out a common action programme.

Study and action-projects by local groups, regional camps to understand a local health problem and its broader dimensions, health educational campaigns are other activities through which mfc has grown and consolidated. The camp on lathyrism in Rewa District in 1978, the educational campaign against Oestrogen—Progesterone forte, about diarrhoea and misuse of drugs are examples. mfc is also an active members of the All India Drug Action Network.

Organization

The medico friend circle is not a rigid organization. It is loosely knit and composed of friends from various backgrounds, usually medical to start with, often differing in their ways of thinking and in their modes of action. But the understanding that the present health services and medical education system is lopsided in the interest of the privileged few and must change to serve the interest of the poor people of India, is common conviction.

mfc is registered under The Societies Registration Act 1860; No. MAH/902/Pune/81 and under The Bombay Public Trust Act, 1950; Reg No. F-1996 (Pune).

Membership

Anybody who broadly agrees with the perspective and the rules and regulations of mfc is welcome to become a member. Non-doctors are encouraged to join. The membership fee is given below. It is understood that members capable of contributing more than the minimum will do so. Conversely the convenor can waive or reduce the membership fees in deserving cases. For membership forms and rules and regulations, please write to the convenor.

Membetship fees

Those earning less than	Rs. 750.00 p.m.— Rs. 25.00 per year
Those earning more than	Rs. 750.00 p.m.— Rs. 50.00 per year

Membership fee includes subscription to the mfc bulletin.

Bulletin subscription

Within India—Rs. 15.00 per year
(add Rs. 3.00 for payments by cheque)
Life subscription—Rs. 250.00

Foreign countries
—sea mail—US $4.00 for all countries
—air mail: Asia—US $6.00
Europe, Africa & Australia —US $9.00
North & South America— US $11.00

All payments my be made in the name of medico friend circle and sent to:

DHRUV MANKAD
Convenor, mfc
Office
1877 Joshi Galli
Nipani 591237
Belgaun, Karnataka

Publications

The following are obtainable from the above address on payment:

1. Subject-wise index of first 100 issues of bulletin.
2. Anthologies of bulletin articles.
   I—In search of Diagnosis
   II—Health Care Which Way to Go
   III—Under the Lens—Health & Medicine (From Jan 1985).
3. Back issues of some of the bulletins (ask for separate list).
4. Editorial guidelines for contribution to buletin.
5. Background papers of some annual meets (ask for separate list).

Bulletin Back Issues

Xerox copies of mfc bulletin back issues are available with the Centre for Education and Documentation

(CED), 3 Suleman Chambers, 4 Battery Street, Bombay 400039.

In order to cover costs and at the same time provide subsidies to deserving groups as graded rate structure has been worked out and is available on request.

For mfc members rate is—

i. set of 100 issues—Rs. 240
ii. specific issues—Rs. 4 each
iii. specific article—0.60 p. per page

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For further details write to Anant Phadke,
mfc Rational Drug Policy Cell.
50 LIC quarters, University Road, Pune 411006.